COMMERCIAL CAR JOURNAL

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VALUE -not price

Each Republic model is built to give the maximum strength, durability and efficiency of service in the field for which it is designed. It represents the highest ideals of Republic engineers unprejudiced by any attempt to meet a price.

The comparatively low price finally fixed for all Republic Trucks is made possible because of the gigantic resources and facilities of Republic and the lessened manufacturing costs due to mammoth production and concentration on truck manufacture.

The exceptional values which quantity production and specialization have thus made possible, give Republic dealers a tremendous sales advantage.

Seven models-34 ton to 5 ton.

REPUBLIC MOTOR TRUCK CO., INC.
Alma, Michigan



REPUBLIC

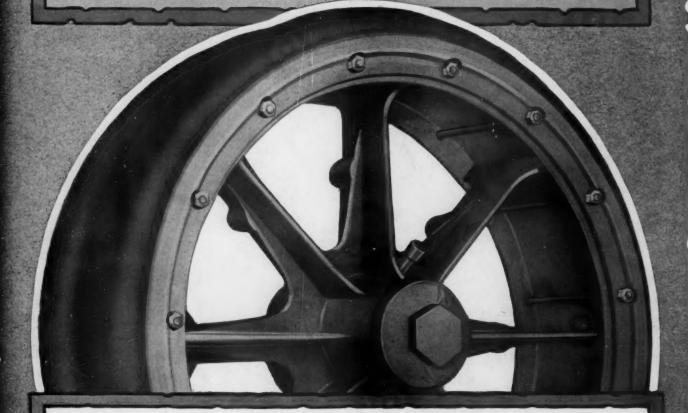
The Torbensen Internal Gear Drive, used in all Republic Trucks, delivers 92% of the motor power to the wheels. We know of no other type of drive that delivers as much.

Internal Gear Drive

MOTOR TRUCK

Built by the Largest Manufacturers of Motor Trucks in the World

Cast Steel Wheels



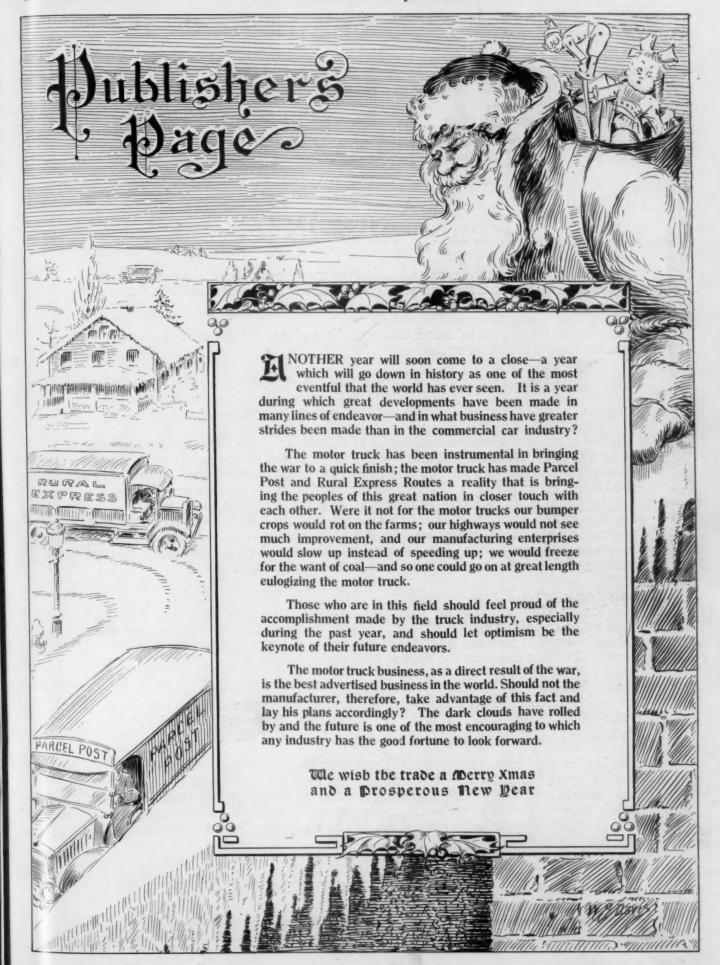
- AMERICA'S BEST-

More than 80,000 West steel wheels now in service. The oldest and the most successful, the strongest and the most dependable steel wheels made. All hubs cast integral with the wheels.

Specify WEST CAST-STEEL WHEELS on your next truck order
Patents pending

THE WEST STEEL CASTING COMPANY CLEVELAND OHIO

"Watch the West Cast-Steel Wheels Go 'Round'



DENBY MOTOR TRUCKS

Pioneer of The Internal Gear Drive

Peace and Prices

HERE is a general expectation that the coming of peace and the consequent release by the Government of priority claims on materials will be followed by a sudden drop in prices.

This idea is based on a mistaken understanding of conditions, at least as regards products into which iron or steel enters largely.

The demands of the Government had nothing to do with the *price* of motor trucks; they affected merely the *supply*. Motor truck prices were determined by the two factors of cost of materials and cost of labor in assembling them.

Neither of these two factors of price will be altered for a long time to come. Given an open market for materials, and the cost is regulated by the law of supply and demand. One does not have to be an expert to know that scores of industries in the United States have been starving for iron and steel for a long time—industries ranging from baby carriages to buildings, from carpet tacks to motor vehicles. Supplies of the finished product in all these so-called non-essential lines are practically exhausted; the release by the Government of raw materials simply means a wild scramble for them, with price entirely secondary. And this is saying nothing of the enormous demands for reconstruction abroad.

Labor costs, too, will remain stationary. It should be remembered that the supply of labor on Government activities was only maintained by the most stringent elimination of outside work—and even then we were a million men short. Normal industrial work is clamoring for these men, at high wages, as fast as the Government will release them, or the men in military service.

Denby Trucks—and practically all other high grade motor trucks—have been reasonably priced. There has been no arbitrary inflation and so can be no arbitrary cut. Reduction of price can come only by lower cost of labor and materials—a thing that cannot come for a long time, if at all.

People who need motor trucks need them now. We are entering upon a period of high-speed industrial activity when fortunes await the swift and the efficient; but there is no place for the laggard. Success will come only to the concerns which get away on their toes to a running start and are able to maintain the pace. Antiquated delivery or haulage methods will be a handicap hard to overcome.

DENBY MOTOR TRUCK COMPANY-DETROIT

THE MERCI

under the act of March 3, 1879

Vol. XVI

PHILADELPHIA, DEC. 15, 1918

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"NORMA" PRECISION BALL BEARINGS

That safe reserve of resistance which serviceability demands must characterize every detail of construction in a machine. A part that is dimensionally small and insignificant may yet be the key to continuous, profitable, serviceable operation. No superficial analysis of values can be a safe guide to decision.

> Builders of dependable ignition apparatus and lighting generators standardize on "NORMA" Precison Bearings-knowing that bearing failure in these secondary units will cripple the best car, truck, tractor, power boat or airplane, and relying upon "NORMA" Quality to guard against it.

> > Be Sure-See That Your **Electrical Apparatus** Is "NORMA" Equipped

THE NORMA COMPANY OF AMERICA

1790 BROADWAY

Ball, Roller, Thrust, Combination Bearings





Displacing Horse-Drawn Dump Carts As Big Plant Equipment

Fifty tons of coal from hopper to twelve furnaces in one and a half hours is the way this Autocar starts each day for the Lockhart Iron and Steel Company of McKees Rock, just outside of Pittsburgh. The rest of the time it hauls brick, sand and fire clay.

Another Autocar hauls all the ashes from the 31 furnaces to the river bank.

These two motor trucks have displaced six horse-drawn carts with a material saving in cost and added effectiveness in work accomplished.

Are you using space, time and man power to best advantage in meeting the transportation needs of your own plant?

The Autocar Company
Established 1897 Company
ARDMORE, PA.

Autocar

Advertisement appearing in the "Literary Digest" and other national publications

The Commercial Car Journal

VOLUME XVI

PHILADELPHIA, DECEMBER 15, 1918

NUMBER 4

How Motor Trucks Revolutionized the Business of a Large Manufacturing Concern

Motor Trucks Saved the Day on War Orders. Auxiliary Equipment Increases the Efficiency of the Machines. Drivers Are Given Six Months Apprenticeship Training

By C. P. SHATTUCK

HIS is a story of how the transportation superintendent of a large manufacturing company relying upon horse drawn equipment, "sold" its directors the plan of using motor trucks, how he revolutionized loading methods and routings, increased the radius of delivery, eliminated the railroad to a great extent, cut down the cost per ton-mile, and how the trucks saved the day when the company became involved in a huge war contract for the Allies.

Previous to and more particularly during the winter of 1910 the superintendent made an exhaustive study of the company's haulage conditions and became convinced that motor trucks could haul the raw material and finished product much more expeditiously and cheap-

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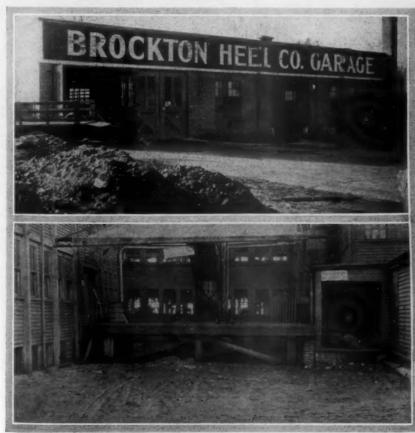
er than horses could, but convincing the directors was not so easy. Persistent hammering, however, broke down the resistance and in the spring of 1911 sanction was given to the purchase of a 2-ton truck. A. M. Burgess, the superintendent, whose dynamic energy made possible the introduction of the first motor truck (there is a fleet of them now) and made it perform in keeping with his promises to the directors, proved his contention that the trucks would be cheaper than horses. An interesting feature of the transportation involved is that the greater part is what may be classed as short hauls.

Short-Haul Work Developed

When the first truck was placed in service it was utilized for long hauls,

although they would not be classed as such in these days of motor truck highway transportation. The car was also used for hauling raw material from the sources of supply and finished goods to the freight yards. It also picked up and delivered material in the surrounding towns and delivered rush orders. The car did well for trucks in those days, but despite its short comings it stood up so well that when superintendent Burgess asked for an appropriation to purchase two more machines the money was forthcoming.

The original truck was sold and the proceeds used in purchasing a 1500-lb. and a 3-ton White with stake bodies. The development of the transportation system of the Brockton Heel Co., Inc., Brockton, Mass., practically began with





Bumper Platform and Improved Loading Device Increase Truck Efficiency

The paved driveway between the garage and main road makes it easier to maneuver the trucks; the bumper platform prevents damage to the truck and body when backing up; a novel loading chute allows goods to be shot direct to the truck.

these trucks. This concern has its main factory in Campello, a town several miles from Brockton, another in Centralia, Ill., one in St. Louis, Mo., and one in Lewiston, Me. The company manufactures leather heels, soles, etc., and deals in leather generally used by the shoe factories.

The 1500-lb. and the 3-ton Whites enabled an increase in the radius of pickups and the schedule was extended to take in the towns of Whitman, Abington, Stoughton, Bridgewater, Rockland, etc., all places engaged in the leather or shoe industry and located within 15 miles of the main factory. These towns were served largely by horse drawn equipment, freight and express previous to the introduction of trucks.

Alters Loading Methods

Although Mr. Burgess enjoyed the confidence of the company he did not increase his fleet until he thought out a well defined plan for increasing the efficiency of the machines, particularly with reference to conserving time in loading and unloading the trucks at the factory. The loading conditions at that time were, perhaps, adaptable to the slower moving horse with its lesser capacity, and the use of manually operated trucks, slow moving elevators and many handlings of the material and finished product probably were efficient enough for use with horse-drawn equipment but too slow for the motor truck, at least, so Mr. Burgess decided.

In brief, his plan provided for the building of new loading and unloading platforms, use of more rapid equipment for bringing the goods to and from the platforms, locating elevators convenient to the platforms and utilizing adjustable chutes with which the goods could be shot direct to the truck. These and other details of the plan were worked out, accepted by the directors of the company and put into operation.

Shock-Absorbing Loading Platform Saves Trucks

These platforms are so arranged that the work is divided; that is, trucks bringing in raw material and those loading finished work do not conflict or interfere with the efficiency of the factory. Two of the platforms were especially constructed according to plans drawn up by Mr. Burgess. He had for some time noted that the trucks in backing up to a platform would frequently strike it with considerable force, which performance gradually broke down the platforms and was not doing the trucks any material

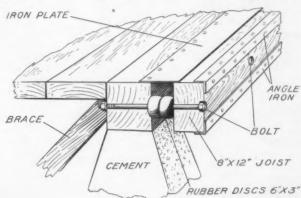
The accompanying detailed sketch shows the large rubber bumpers slidingly mounted on the bolts supporting the 8 x 12 joist with which the truck comes into contact when backing up to the platform. The joist is protected with angle iron and the gap between it and the platform proper is bridged by a metal plate secured to one of the stringers. Mr. Bur-

These improvements increased the efficiency of the trucks and resulted in the purchase of two 5-ton Whites in 1915 and the sale of all horses. Shortly afterwards the company became involved in a large war contract dealing with the supplying of army shoes to the Italian and Russian Governments. It was a rush order, one involving the operation of the plants on a 24-hour a day basis, which meant handling vast quantities of raw material to say nothing of the finished products.

Trucks Save Contract

Part of the order was supplying heels to the factories in Brockton, where the shoes were made, a short haul of approximately four miles. It was highly im-

Rubber Coils Between Main Platform and Bumper
Absorb Shocks and
Save the Trucks



gess estimates that the construction has avoided the possibility of considerable damage to the trucks and platforms and believes that the installation warrants the extra cost and labor involved. Regardless of this platform construction, however, the drivers are cautioned not to make free use of the shock absorbing feature.

Good Approaches to the Platforms

Another innovation introduced by Mr. Burgess was the construction of good approaches to the platforms and the garage. Instead of sharp rises and dirt roads with ruts and pot holes, the driveways between the main roads and platforms were graded and paved with cement, affording better traction and safer operation for the trucks.

portant that the supply be maintained on a schedule and any break or interruption in the transportation system would have spelled the loss of thousands of dollars, particularly during the months of January and February when the peak of the work was reached.

Realizing the inability of the hired horses assisting in hauling the material to withstand the gruelling work, superintendent Burgess added another 1500-lb. capacity White and a month later a 2-ton White. That they proved, as did the other trucks, a mighty profitable investment, is best described by Mr. Burgess' story of that winter.

"We would have been unable to fill the terms of our contract," he said, "for during the winter we experienced heavy







The Veteran of the Fleet. Has Been in Service Since 1912, Constantly Carrying Capacity Loads and is Still on the Job

snow. The first storm demonstrated the mability of the horse, so we put the entire fleet on the work, doing away with horses. Horses could not buck the drifts and make a return trip, nor could they stand working 18 hours a day which the trucks did. We used two and three shifts of drivers, and at times had to shovel out the deep drifts. The trucks often broke out the paths and despite the severity of the work not one of the machines lost an hour. Had one machine broken down it would have meant

Cost figures show that not only are the trucks cheaper than freight but considerable time is saved and it was conserved during a period when every hour meant dollars. It is not uncommon for the trucks to average 45 tons daily. The use of the machines has eliminated several handlings and permits of more rapid distribution. Material and goods are received and shipped by the common carriers, but the transportation is confined to products having to do with the Illinois, Missouri and Maine factories. At

BENCH VISES WELDING SKYLIGHT SKYLIGHT ANVIL FORGE WASH STAND LATHE GRINDER SLIDING DOOR 80 TRUCKS POSITION CAR ENTRANGE AVATORY ENTRANCE FOR TRUCKS BULLETIN OFFICE

Floor Plan of the Brockton Heel Company's Garage

disaster, for we had to rely either upon horses or trucks for the haul."

One of the hardest worked machines was the 1500-lb. White, it frequently making twelve trips through the snow between Campello and Brockton. In addition, the trucks hauled raw material from the railroads and picked up and delivered its products as previously described. Under the abnormal conditions the improved transportation facilities introduced by Mr. Burgess proved their economy and efficiency.

Trucks Replace the Railroads

During the time of the contract and up to the present the White trucks have been selected by the company as standard equipment, the superintendent contending that maintenance costs are less than with a mixed fleet, that the mechanics complete adjustments in quicker time, become more proficient because of working on one type and that the purchasing of equipment and stocking of parts, tools, etc., is greatly simplified. The last truck added was a 5-ton White in September, 1917.

The trucks have eliminated the railroad on the longest haul, that between Brockton, or rather Campello and Boston, a distance of 23 miles and over the Blue Hills where the grades are heavy. times there are embargoes on the road serving the Maine plant and when such is the case a 5-ton White makes the trip to Lewiston, which is 195 miles and not over the best of highways. The truck generally returns loaded.

Drivers Carefully Trained

The thoroughness with which the drivers are trained is a factor in the successful use of the trucks. Mr. Burgess does not believe that a \$5,000 assembly of mechanism should be given over to a man until he has a practical knowledge of not only the transportation but of the components of the chassis. Every driver of the company serves at least an apprenticeship of six months as a helper on the truck, is given shop experience and his work is carefully noted. He is then allowed to operate with, a trained driver. This course is pursued before he is allowed to make an application for a driver's license.

Constructs Ten Thousand Dollar Garage

Another indication of the practicability of the trucks was the authorization of the construction of a \$10,000 garage, and in this connection it should be stated that those having a vote or control of the disbursement of moneys include foremen in the plant. The garage is

within a few blocks of the Campello plant, 83 x 65 ft., and is constructed of brick. Double doors of ample width facilitate the entrance and exit of trucks and a separate entrance is employed for the passenger cars of the officials of the company.

Large skylights afford the maximum of light and the equipment is modern in every respect. Partial and complete overhauls are made by the mechanics and the machinery equipment of the factory permits of fine work. Constant inspection and attention to minor adjustments is a rule adhered to and a complete overhaul of the chassis is made every three years. The lubrication of the chassis and inspection is by the drivers who are allowed three hours' extra pay weekly for the work. Incidentally, the men are well paid.

Cost Per Ton-Mile

It is to be regretted that cost figures were not obtainable for publication, but Mr. Burgess stated that the cost per ton mile to date of the various cars was as follows: 1500-lb. capacity, 18 cents; 2-ton, 24 cents; 5-ton, 26 cents. The figures include interest on investment, depreciation, insurance, fuel and lubricants, parts and repairs, garage expense, etc. Burgess estimates that the trucks have saved the Brockton Heel Co. a large sum of money, particularly under the present freight tariffs between Brockton and Boston, which call for 251/2 cents per 100 in ton lots plus the 71/2 cents per 100 for teaming charges at both ends.

S.A.E. Winter Meeting to be Held in New York

Engineers are anticipating many interesting sessions at the mid-winter meeting of the Society of Automotive Engineers, to be held at New York City, Jan. 12-24. It is expected that there will be many discussions concerning the progress of automotive engineering during the war, formerly not available.

At the "Victory Dinner" to be held at the Hotel Astor, recent developments in aircraft production will be discussed, as well as recent phases of motor truck, motor patrol boat, motorcycle and stationary farm engine construction.

War and post-war problems will be discussed at the technical sessions, to be held at the S. A. E. headquarters in the Engineering Societies Building.

Eisemann Magneto to Be Sold at Auction.—The Alien Property Custodian, in offering for sale 1500 shares of stock in the Eisemann Magneto Co., Brooklyn, N. Y., plans to turn over permanently to American owners 75 per cent. of the company's stock. These shares were previously enemy-owned. The stock will be offered for sale Dec. 16 in the company's office. The par value of the shares is \$100.

Standard Foundry Co., Racine, Wis., is planning to erect a \$50,000 foundry building. It will be 80 x 200 ft., and of brick and steel construction.

Feeding a Great Electric Railway System by Means of Motor Trucks

Network of Electric Railroads Centering in Chicago Now Brought in Closest Contact With That City's Business and Manufacturing Center by the Interurban Motor Dispatch. System, in Operation But Few Months, Growing Rapidly

By A. V. COMINGS

HERE was established in Chicago, last August, a system of motor truck collection of freight and express matter, destined for shipment by electric railroads, and distribution of incoming shipments of the same sort, that has proved so successful that already plans are being made in other large cities to duplicate it.

Concentrating Freight Terminals

The chief difficulty in the operation of the electric lines, centering in the larger cities, has been in the inability of the large express cars to reach the business centers of the communities, where most of the outgoing freight originates and where incoming freight must be delivered. In Chicago for instance the electric line terminals are from six and a half to thirteen miles from the center of the city, and up to last August all incoming freight and outgoing freight and express matter had to be handled individually over that distance. With railroad freight terminals closer in, shippers naturally used the steam roads in preference.

In August the Interurban Motor Dispatch began operations, with W. T. Gridley as vice-president and general manager, and with the idea of taking over the handling, by motor truck, of all incoming and outgoing freight and express matter shipped over the electric lines centering in Chicago. Associated with Mr. Gridley in the enterprise are

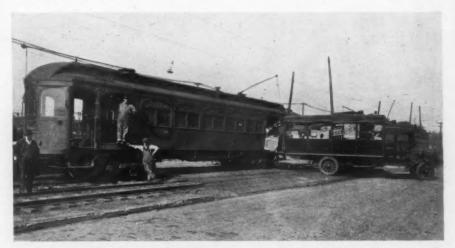
G. W. Stratton, president of the Stratton-Gramm-Bernstein Co., of Chicago, distributors of Gramm-Bernstein trucks; H. B. Willower, sales manager of the Gramm-Bernstein Company, of Lima, O.; H. G. Metzler and H. G. Coumbe. Messrs. Stratton and Gridley are said to hold a controlling interest of company's stock.

Interest of Shipping Quickly Secured

Previous to beginning operations, this company sent out questionnaires to near-

ly a hundred firms in Chicago and surrounding territory, outlining the plan and asking if they would use the service. About 90 per cent. of the firms replied that they would, and this result, aided by personal canvass of merchants along the routes of several of the electric lines, assured the success of the enterprise from the very start.

A central warehouse and depot was rented by the company at the corner of Market and Randolph streets, in the very



A Load of Freight From the Central Chicago Depot Being Transferred to a "North Shore" Car at Its Terminal in the Northern Part of the City



Two of the Gramm-Bernstein Trucks and a Lee Trailer in Front of the Interurban Motor Dispatch Depot at Market and Randolph Streets, Chicago Manager Gridley is in front of the first truck, facing the driver

heart of the downtown or loop district in Chicago. Contracts were entered into with the Chicago, North Shore and Milwaukee, the Chicago, Aurora and De Kalb, the Elgin & Belvidere, the Rockford & Interurban, and the Aurora, Elgin and Chicago electric railroads, and contracts are now pending for the company to operate on the same basis with most of the other electric lines centering in the western metropolis.

The terminals of these roads range from the Laramie Ave. depot of the A. E. & C., 6½ miles out, to the North Shore depot, 13 miles out, but as the streets are level and well paved all the way, haulage problem is not a hard one.

The Business Shows Steady Growth

At the present time eight 3½- and 5-ton and two 1½-ton Gramm-Bernstein trucks, with two 5-ton Lee trailers, handle from 80 to 100 tons of merchandise, passing through the company's hands to and from the railways. Already more rolling stock has been ordered, including more trailers, for the business of the

company is constantly growing as its usefulness becomes better known.

Jobbers, department stores, merchants of all classes, and manufacturing concerns are using the service, and department stores, particularly, are finding it a wonderful help to them in reaching the out-of-town customer. Some of these stores have carried on out-of-town advertising campaigns, based solely on this new service.

In Chicago the company makes its own pickups and deliveries, using the lighter trucks for bringing express matter to the depot, where it is transferred to the larger trucks for haulage to the electric terminals. The rate for shipment from consignor to consignee, from the shipping platform of one to the receiving door of the other, runs from a cent to a few cents above present express rates. But the quickest steam road delivery to most points reached by this motor truckelectric railway system is about twelve hours greater, and in many instances two to four days longer. The average rate for the combined system runs close to 50 cents per 100 pounds.

Through bills of lading are used, and a checking system which almost precludes the possibility of shipments going astray. Every effort has been put forth toward giving shippers a perfect service, and judging from the constant increase in business, the service is meeting with success.

Careful, Efficient Management

Mr. Gridley, the general manager of the company, is a traffic man of long experience, and this experience is being used in bringing the handling of all goods down to the highest point of efficiency. Collection routings of trucks are so arranged that a minimum distance is covered for the amount of goods collected, and in sending goods to the terminals from the central depot, trucks are generally loaded to capacity, with trail-

ers, when possible, loaded the same, so that hauling costs are cut to a minimum.

The company pays its drivers \$27.50 per week for six tenhour days, the drivers working in two shifts, from 7 A. M. to 5 P. M. and from then to 11 P. M. Truck inspections and repairs are kept up daily, so that there is a minimum of the latter. A company garage is to be built.

In addition to salary employees are to be given a bonus based on length and quality of service.

The main offices of the company are in the central depot at Market and Randolph Sts., whence the routing and dispatch of the trucks is arranged.

The company plans eventually to use motor barges on the Chicago River, in collecting freight within a radius of nearly fifty miles of the city, but this is a

development left to the future when the present system has been more nearly perfected. Chicago presents a fertile field for a system along the lines now being pursued by this company, and its growth will be watched with interest by transportation engineers thruout the country.

EXPRESS — FAST FREIGHT SERVICE

THE



Interurban Motor Dispatch

OFFERS SHIPPERS Choice of

Express or Freight Shipments
In Connection with

Aurora, Elgin & Chicago Railroad

Freight Station Most Centrally Located
In Chicago
Randolph and Market Streets

Relieve your Steam Road of short hauls, and get prompt deliveries.

All shipments made while you sleep and ready for your customers early in the morning. Buy your goods in Chicago any day and have them on display in your store next day.

MR. SHIPPER, you do not know what an advantage this is until you have tried it. For tariffs, schedules and service, call

Local Agent of Aurora, Elgin & Chicago R. R. Or-Interurban Motor Dispatch, Chicago Phone Main 2161

Newspaper Advertisement in the Chicago Papers Calls Attention to the Advantage of Motor Truck Hauling in Connection With the Electric Lines

Truck Production for 1918 as Estimated by the N. A. C.C.

In view of the fact that several months will be required to secure deliveries of all the material and parts needed to get back on a full production basis, it will hardly be possible for truck manufacturers to build more motor trucks next year than the average rate of past production.

In 1917 there were produced 160,000 commercial cars. There was no enforced limitation of truck production until last August, except that many assemblers were unable to obtain deliveries of engines, transmissions and axles. Trucks produced and sold for civilian use only last year totalled 109,000, while this year they will reach 182,000—an increase of 67 per cent. Production of trucks by quarters in 1918 is as follows:

Commercial Cars—(Civilian Only)

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First	quarter .						0		0	0			0			0		0	0		0	0		45,500
Second	d quarter				0.4		0		0	0			0		0	0		0			0			45,417
Third	quarter			0				0				۰	0		0	0	0	0	0			0		45,429
Fourt	h quarter	(e	8	t.)		0	0	0	0	0	a	0	0	0	0	0		0	0		0	46,300
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Next! Our Annual Commercial Car Review Numbers—Dont Miss Them.



Checking in Freight at the Depot of the Interurban Motor Dispatch in Chicago

How One Long-Distance Hauling Concern is Overcoming Driver Troubles

Owners Transportation Company, of Boston, Supplies the Business; Furnishes Service, Fuel, Etc., at Cost. Truck Operators Pay Company a Small Percentage of Profits and Own Their Machines

By C. P. SHATTUCK

HERE is operating out of Boston, Mass., a fleet of motor trucks under a system that differs from conventional transportation practice in that the drivers are owners of the cars. The Owners Transportation, so-called because of the affiliation of the drivers, was organized last August by Melvin F. Goodrich, president; John L. Judd, New England agent for the Gramm-Bernstein trucks, treasurer, and Carl H. King, as manager. The plans of the organization, which have been adhered to, provide for the standardization of all transportation units; location of service stations equipped with spare parts and operated by the company; branch offices in the principal cities and drivers having an interest in the business.

Drivers Buy the Trucks

The originators of the plan believe that the most successful method of eliminating the many inherent faults of the truck driver is for him to have an interest in the machine and the success of the business. They contend that the owner-driver will not abuse his property and that he will make minor adjustments and repairs often neglected by the salaried man. Furthermore, it is held that the owner-driver will be courteous to the shippers, will hustle for new business and will work overtime when the occasion demands.

Company Agrees to Supply Certain Amount of Business

The drivers are privileged to purchase the trucks on the time basis if they desire and the company enters into a contract with them, agreeing among other things to supply each truck with a certain amount of gross business weekly. This is guaranteed for a well defined period and there is a renewal clause of which the owner-driver may take advantage. The amount of this guarantee and the time period are sufficiently liberal to enable a driver to clear himself under the terms of the contract.

The company provides the shipments and has completed an organization for this purpose. The owner of the truck is practically a driver executing the orders of the company in transporting merchandise, and, although he is not asked to solicit business, many of the men do so when an opportunity is afforded.

Company Accepts Responsiblity

The company accepts all responsibility in transacting the business. If a contract be entered into with a manufacturer to haul a large amount of material, and should the latter fail to pay his bills, the Owners Transportation Co. accepts the loss, not the driver. In other words, the owner-driver is paid for every pound of material loaded on his truck. If he obtains business and the consignee or consignor fails to pay, the driver does not sustain any loss, being credited with the rate. One of the members of the company said that the plan assures the driver receiving that which his truck earns and without the delays usually obtaining under the conditions the average trucking company operates. Insurance

is largely carried by the company, the drivers simply carrying that which protects their investment.

Free Service and Parts at Cost

The terms of the contract provide for free service and the supply of gasoline, oil, grease, parts, etc., at actual cost. Service stations have or are being established at all of the main points touched by the trucks, such as Boston, Springfield, Hartford, New York, Baltimore, Washington, Providence, New London, New Haven, etc., and the plans provide for a paid employee of the company to provide service, fuel, oils and parts. These men are expert repairmen and are familiar with the truck used.

One of the advantages of the company's service station plan is that trucks en route with valuable cargoes or ordinary loads, utilize the service station for stopping over night when garaging is necessary. The station is also useful when a truck remains a day while a return load is being arranged as will be explained. The men in charge of these stations are supposed to be prepared to respond to any call made by a driver in trouble on the road and within the zone of the station.

To Stock Spare Parts

In the event of trouble the driver has instructions to call the nearest station, and should a part be desired the repairman is supposed to bring it to the truck and install it if practicable. If not, the truck is towed to the station. Each station is to be supplied with standard parts, these to include a complete power plant, gearset, rear axle, springs, radiators, and such parts which can be replaced as a unit. Drivers en route and stopping at a service station are requested to have the man in charge inspect the truck and make any needed minor repairs or adjustments. There is no charge for this work and a certain amount of repair work is provided free.

Obtaining Return Loads

The promoters of the company have made an exhaustive study of transportation with trucks and from the start have concentrated on the development of the return load movement. At the main city branch offices, which are to be augmented as the business develops, are solicitors whose energies are directed towards obtaining new business and securing return loads for trucks visiting their cities. The manager of these



One of the Six-Ton Gramm-Bernsteins With Capacity Load

Stake bodies are employed and shipment is protected by tarpaulins. All trucks carry a triangular emblem bolted to the radiator header

branches directs the activities of these men, arranges for the return loads and has control of all drivers visiting his territory.

Drivers are instructed to report to the managers for instructions or orders and are not supposed to return to the main office at Boston when on a long haul, etc., without securing a return load. The supplying of the load is up to the manager of the branch. Drivers are not allowed to leave the main highways for a load without obtaining permission from the nearest control, but should it be necessary to leave the trunk line directions or the route must be obtained from the nearest main office. This rule is insisted on to avoid the possibility of trucks becoming mired or meeting with trouble.

Trucks Operate on Schedule

The trucks operate on a fairly consistent schedule and the time required to haul over a given route is estimated by previous trips and an average obtained. For example: The trip from Boston to New York, 245 miles, is made in two days, the return in a similar time, but the truck remains in New York one day to obtain a return load. The trucks are operated 24 hours a day and carry a helper who is paid by the owner-driver. The Boston-Philadelphia trip, one way, is made in three days, and the Boston-Baltimore and Boston-Washington in approximately the same time.

Whenever a truck leaves Boston with a partial load en route for Philadelphia, Baltimore or Washington, the New York branch must provide sufficient material to make a capacity load. Similarly, on the return trip, the same office is supposed to see that the truck carries at least a paying load on the return to Boston. If goods be not available the truck remains a day or so until the load

is obtained.

Rates Based on Solid Weight

The rates or schedule given herewith are based on solid weight, subject to option of the company. Light material is scaled at 20 cents the cubic foot, also based on direct main line route of terminals as given in the schedule. The company makes a charge of 25 per cent. on all freight from New York City to and from Newark and Jersey City, N. J.,

drawn equipment as well as with motor trucks, and his extensive acquaintance with manufacturers and shippers has been a great aid to the company. The bills of lading and way bill sheets employed are simple and consist of the original and three duplicates. The original, or No. 1 sheet, is retained at the main office; No. 2 is the receipt given to the shipper by the driver, No. 3 is the con-



This Map Shows Scope of Delivery Made by Trucks and Location of Branches

because of the ferry tariffs and delays. The New York City delivery includes only Manhattan to 59th street, 10 per cent. additional being charged between that street and the Battery. An additional charge of 20 per cent. is made for delivery in Brooklyn, the Bronx and Long Island because of delays occasioned by traffic, etc. No shipments accepted of less than \$1.

The transportation is in charge of H. E. Cunningham, who has the advantage of many years of experience with horse

signee's receipt to the Owners Transportation Co., and No. 4 is the consignee's bill of lading reference.

Drivers' Instructions Duplicated

Drivers are supplied with instructions as to the destination of cargo, where to stop for pick-ups, etc., and a duplicate is sent to the New York office when the cars are en route for Philadelphia, Baltimore, etc. These instructions are mailed and reach the office before the arrival of the truck, and if the load be a partial

Some of the Circular Letters Used by This Company

The illustration above shows card which is enclosed in all circular letters sent out by the company; the illustration to the right shows a business getter that is enclosed in all mailed matter; the small card shows a sticker supplied to customers for rush orders.

Name of firm (Your name here
RUSH	Ship this order at once via OwnersTransportation Co., and oblige

TO OUR CUSTOMERS

IN order to facilitate shipments we have arranged with the OWNERS TRANSPORTATION COMPANY to deliver shipments that are required for a specified time.

This Company operates a fleet of trucks from Boston to New York City, New York City to Washington, D. C., on a schedule of 100 miles every 10 hours.

If you desire to have such shipments made by them, we will furnish a number of order stickers that will insure our attention as Rush business.

Please advise us if you wish some of these as per sample enclosed.

THIS SPACE FOR YOUR NAME

one the manager of the office must hustle and supply the deficiency. All a driver has to do in reporting is to give his name.

Drivers and their helpers assist in loading and unloading and work Sundays if loads are available or the machines are en route. The trucks in service at the time this article was prepared consisted of fourteen 6-ton and two 2-ton Gramm-Bernsteins. The small models are equipped with dumping bodies and are used for short haul work in and around Boston. In connection with the larger capacity trucks it is interesting to note that the charge for a capacity load from Boston to New York is said to be the same as for a five-ton load or \$150.

Aided by Return-Loads Bureau

When asked by the "Commercial Car Journal" representative if the various Return Loads Bureaus of the States traversed by the trucks co-operated in providing return loads, the superintendent of transportation of the company stated emphatically that with one exception the bureaus did not, that loads could not be obtained even when sufficient notice was given. "The only bureau, live bureau, I mean, is in Providence, R. I. Its manager, a man named Leadbetter, has given us lots of business. He has arranged a \$10,000 contract for hauling for us between Paw-tucket, R. I., and Yonkers, N. Y., and for several weeks supplied us with return loads as well as general business. There is absolutely no service with the local bureau (Boston) or any in the State (Mass.) As for Connecticut, we have never been able to obtain any part of a load although we operate on a schedule. We dig up our business, employing solicitors or salesmen who work on a salary and commission basis. These men are checked; that is, their work is for slips they turn in or reports on prospects are followed up by a checking system.

Publicity Department Active

The company maintains a publicity department that sends out circular letters, a sample of which is quoted herewith. Enclosed in the letter is a call card for the salesmen, a sample order sticker for the use of the shipper and a printed slip for the shipper to send his customers, all business getters. These, coupled with the follow-up by the solicitors, are obtaining business.

The cost of maintaining the organization is partly defrayed by the owner drivers who pay a certain per cent. of their earnings; that is, a commission on the gross volume of business. In return for this the company provides shipments, clerical work, etc., as previously explained. The writer interviewed several of the drivers he met on the road between New York, New Haven, Hartford and Boston and all said the arrangement worked out very satisfactorily, that there was sufficient transportation to keep them busy every day, including Sunday.

		Route Number 1		
Miles from	Rates		Rates from	Miles from
	Boston	Stations	N. Y.	N. Y.
	100 lb.			
10	.40	Dedham, Mass.	1.50	235
14		Norwood, Mass.		231
18	46	Walpole, Mass.	**	227
31		North Attleboro		214
39	4.5	Pawtucket	66	206
44	4.0	Providence	1.10	201
54	.82	Aponaug	66	191
56	44	E. Greenwich	4.6	189
60	**	Davisville	4.6	
63	4.4	Wickford	**	181
65	**	Hamilton	4.6	180
69	4.6	Saunderstown	4.6	176
75	4.6	Narr. Pier	4.6	170
78	4.6	Wakefield		167
87	44	Charlestown	1.6	157
99	4.6	Westerly	8.9	146
104	8.6	Stonington	4.6	140
109	4.6	Mystic	4.6	136
116	.99	Groton	64	130
117	46	New London	44	129
123	44	E. Lyme	.99	121
125	66	Saybrook	44	109
140	4.6	Westbrook	4.6	105
144	4.6	Clinton	4.6	100
148	44.	Madison	4.6	96
151	1.6	E. River	4.4	94
153	4.6	Guilford	64	91
162	**	Branford	6.6	83
170	**	New Haven	4.4	75
179	**	Milford	4.6	66
182	44	Devon	4.6	63
184	44	Stratford	44	61
187	1.25	Bridgeport	6.6	57
192	66	Fairfield	44	52
194	44	Southport	6.6	51
198	14	Westport		47
201	44	Norwalk	.66	44
205	4.0	Darien	4.4	40
207	6.6	Norton	**	37
210	1.50	Stamford	44	35
213	66	Cos. Cob.	4.6	31
215	14	Greenwich	**	30
218	44	Portchester, N. Y	7. "	27
220	**	Rye	14	25
223	**	Mamaroneck	6.6	21
225	4.6	Larchmont	4.6	20
227	**	New Rochelle	4.6	18
228	**	Pelham Man.	64	16
245	**	New York	**	00

0.0	Walpole, Mass.	**	227	
46	North Attleboro	64	214	
4.5	Pawtucket	66	206	
6.6	Providence	1.10	201	Rhode Islan
.82	Aponaug	6.6	191	Bureau
6.6	E. Greenwich	6.6	189	Durcau
56	Davisville	4.6		The Return L
6.6	Wickford	**	181	by the Rhode I:
**	Hamilton	4.6	180	port Committee
4.6	Saunderstown	4.6	176	In view of the fa-
4.6	Narr. Pier	4.6	170	no effort was ma
44	Wakefield	86	167	
4.6	Charlestown	1.6	157	a further approp
4.6	Westerly	8.9	146	work.
4.6	Stonington	4.6	140	A committee
4.6	Mystic	4.6	136	to work on the
.99	Groton	66	130	tion. As the S
44	New London	66	129	ment lacks funds
**	E. Lyme	.99	121	to have each co
**	Saybrook	44	109	The State depart
4.6	Westbrook	4.6	105	with the commit
**	Clinton	4.6	100	There are six
44.	Madison	4.6	96	
1.4	E. River	4.4	94	and, one of wh
	Guilford	64	91.	trunk line conn
66	Branford	6.6	83	Boston is very
4.4	New Haven	6.6	75	Island is concer
44	Milford	66	66	leads through a
44	Devon	4.6	63	towns that keep
44	Stratford	44	61	their streets.
1.25	Bridgeport	6.6	57	The brunt of
6.6	Fairfield	66	52	
**	Southport	66	51	the highways of
**	Westport		47	ington County,

Route Number 2

		Route Number 2		
10	.40	Waltham	1.50	221
13	+4	Weston	66	218
17	44	Wayland	6.6	215
19	4.6	S. Sudbury	44	212
27	66.	Marlboro	4.6	205
33	.60	Northboro	6.6	199
37	**	Shrewsbury		194
13	44	Worcester	1.10	189
17	4.6	Cherry Valley	66	185
19	66	Leicester	4.6	182
54	.82	Spencer	44	177
58	4.6	E. Brookfield	44	174
61	44	Brookfield	4.6	171
63	44	W. Brookfield	**	168
67	**	Warren	44	168
69	**	W. Warren	44	162
78	44	Palmer	44	153
84	44	W. Wilbraham	4.6	148
94	44	Springfield	.99	138
07	.99	Windsor Locks	**	124
13	4.6	Windsor	1.6	119
19	**	Hartford	44	112
30	66	Berlin	44	101
37	44	Meriden	44	95
43	6.6	Wallingford	64	88
48	44	North Haven	.85	83
		New Haven	.99	

1.60 Jersey City, N. J. 1.75 Newark, N. J.

New Brunswick, N. J. 2.00

2.25 Trenton, N. J.

Philadelphia, Pa. 2.50 3.60 Baltimore, Md.

4.00 Washington, D. C.

and Return-Loads Discontinued

oads Bureau conducted sland Highways Transhas been discontinued. act that the war is ended. ade to ask the State for priation to continue the

of three was appointed snow removal proposi-State Highway Departs efforts are being made ounty remove the snow. rtment is to co-operate ttee, nevertheless.

counties in Rhode Islhich is an island. The necting Providence with short insofar as Rhode erned, and the highway a number of cities and the snow removed from

the expense of keeping pen will fall on Washwhich is largely agricultural. Those familiar with conditions believe difficulty will be experienced in obtaining the co-operation of what is known as the shore road towns and villages, as these places lack the essential equipment for the work.

While definite plans have not been announced, it is believed that the snow removal plans will include the keeping open of the highway connecting Providence with the Massachusetts line, and such cities as Taunton, Fall River, etc.

Motor Truck Show to be Held in Madison Square Garden

At a meeting of the Automobile Dealers' Association of New York, held Dec. 6, it was definitely decided that a motortruck show will be held in Madison Square Garden, Feb. 10 to 15, following the passenger car show to be held Feb.

There has been no exhibition of commercial cars since 1912, when the first "double show" was held.

Applications for space are already being made, and balconies are to be built inside the Garden to provide additional exhibition space.

The exposition committee consists of Charles H. Larson, chairman; Wm. C. Poertner, Walter C. Woods, Harry J. De Bear, R. J. Gilmore, H. R. Bliss, Wm. M. Sweet and Charles A. Stewart. Mr. Stewart is secretary and treasurer of the Exposition Committee and manager of the exposition.

Combining Efforts of Five Companies Makes Motor Truck Transportation Possible From Boston to Washington

Former Truck Agent Heads New England Transport Company, One of the Five Divisions. Adopt Standard Rates. Have a High-Grade Set of Drivers Who Look After Trucks

By C. P. SHATTUCK

HE shrewd dealer in commercial cars frequently advises his customers how their trucks may be used economically and efficiently but rarely is a dealer found who merchandises transportation; that is, who actually engages in the hauling of material. An exception, however, is noted in the case of E. L. Clark, of Springfield, Mass., who is today the head of a large transportation company that is one of five divisions operating large fleets of trucks on well defined schedules in eight states and supplying transportation as far East as Boston and South to Washington, D. C., over a radius of three hundred odd miles with Springfield the

The expansion of the activities of the company, headed by the dealer who a few months ago was selling a well known truck and a converter for Fords, has been so rapid that now the plan embraces five separate transportation companies with headquarters in the principal cities. It is similar in principle to the Inter-City hauling plan in operation at Syracuse, N. Y., which was described in the September issue of THE COMMERCIAL CAR Journal, with the exception that the companies above referred to have well defined schedules, rates and warehouses for storing merchandise and operate over a territory four times greater.

Adopt Standard Rates

The five divisions or transportation companies have what may be termed standard rates. Each company's rates practically corresponds to the others for mileage, weight and bulk so that a manufacturer in Springfield, Mass., desiring to ship to New York, Philadelphia, Baltimore or Washington, is able to easily and quickly determine the costs and the time required for delivery. Similarly, if the manufacturer desires to ship what is termed a mixed load, with deliveries at intervening points, he can readily compute the cost. The schedules accompanying this article, showing the territory served by each unit, prices for less than and more than ton lots show that the rates are based on cwt., and, with the exception of divisions 2 and 5, an extra charge of 10 cents the cwt. is made for less-than-ton lots.

Insurance and Collections

An extra charge is made for the collection and return of C. O. D.'s, which runs from 10 cents for \$2 up to 60 cents for

\$1000. All merchandise transported over the routes of the divisions is covered by insurance up to a valuation of \$50 per cwt., but additional insurance is supplied at the rate of 10 cents for each additional \$100 valuation. Many valuable cargoes have been transported by the companies, changed from one truck to another, and without a loss.

Division No. 1

NEW YORK CITY TO PHILADELPHIA. From New York City.

Stations.

Less Than Ton Lots

to constitute the second	
New York City \$.00	\$.00
Brooklyn	.00
Jersey City	.25
Newark, N. J30	.25
Elizabeth, N. J35	.30
New Brunswick, N. J55	.50
Trenton, N. J90	.80
Bristol, Pa 1.00	.90
Philadelphia, Pa 1.00	.90
From Philadelphia,	
New York City\$1.00	\$.90
Brooklyn 1.25	1.15
Jersey City, N. J 1.00	.90
Newark, N. J 1.00	.90
Elizabeth, N. J 1.00	.90
New Brunswick, N. J 1.00	.90
Trenton, N. J	.70
Bristol, Pa	.70
Philadelphia	.00
Chester, Pa	.25
Wilmington, Del50	.40
Baltimore, Md 1.00	.90

Washington, D. C. 1.50



One of the Trucks Weighing the Load Destined for a Point in Rhode Island

Scales are convenient to loading platform and a small charge is made for their use by the owner.

Division No. 2

NEW YORK CITY TO DOVER, N. J.

From New York Cit	y.
Less Tha Ton Lots	
Stations. Per Cwt	. Per Cwt.
New York City \$.00	\$.00
Brooklyn	.00
Passaic, N. J50	.45
Paterson, N. J50	.45
Boonton, N. J75	.70
Rockaway, N. J75	.70
Dover, N. J	.70
From Dover, N. J	
New York City \$.75	\$.70
Decalation 1.00	0.0



1.40

Manager Clark Giving the Driver the Form Utilized in Shipping and Instructions for Delivery of Goods

	Less Than	Ton Lots
	Ton Lots	and More
Stations.	Per Cwt	Per Cwt.
Passaic, N. J		.60
Paterson, N. J		.55
Boonton, N. J	55	.50
Rockaway, N. J.	50	.45
Dover, N. J		.00
DOTOS, 11. 0		.00
	vision No. 3	
NEW YORK CITY		ELD AND
WC	PRCESTER.	
From 1	New York City.	
New York City	\$.00	\$.00
Brooklyn		.00
Bridgeport, Conn.		.70
New Haven, Con		.75
Hartford, Conn		.90
Springfield, Mass.		1.00
Holyoke, Mass.		1.10
Northampton, Ma		1.35
		1.00
	n Springfield.	
New York City .	\$1.25	\$1.00
Brooklyn	1.50	1.25
Bridgeport, Conn.	80	.75
New Haven, Con-	n70	.65
Hartford, Conn.	50	.45
Springfield, Mass.	00	.00
Holyoke, Mass	00	.00
Northampton, Ma		.00
• Fro	m Springfield.	
Springfield, Mass.		\$.00
Palmer, Mass		.15
West Warren, Ma		.25
Warren, Mass	35	.25
West Brookfield,		.35
Brookfield, Mass.		.35
East Brookfield,		.35
Spencer, Mass.		.55
Worcester, Mass.		.55
		.00
	om Worcester.	
Springfield, Mass		\$.55
Palmer, Mass		.55
West Warren, Ma		.35
Warren, Mass		.55
West Brookfield,		.55
Brookfield, Mass.		.55
East Brookfield,		.55
Spencer, Mass.		.00
Worcester, Mass.	00	.00
* Daily Service.		
Di	vision No. 4	
	CITY TO WAT	ERRURY
TATALL TOTALE	THE AU WALL	ARREST CITET,

NEW YORK CITY TO WATERBURY, CONN.

From New York City.

New York	City	\$.00	\$.00
Brooklyn		00	.00

	Less Than	Ton Lots
	Ton Lots	and More
Stations.	Per Cwt.	Per Cwt
Stanford, Conn	55	.50
Norwalk, Conn	65	.60
South Norwalk, Conn.	65	.60
Bridgeport, Conn	75	.70
Stratford, Conn	75	.70
New Haven, Conn	80	.75
Derby, Conn	80	.75
Shelton, Conn	80	.75
Ansonia, Conn	85	.80
Beacon Falls, Conn.	85	.80
Naugatuck, Conn	90	.85
Waterbury, Conn	1.00	.90
From W	aterbury.	

From Waterbury.	
New York City\$1.00	\$.90
Brooklyn 1.25	1.15
Stamford, Conn70	.65
Norwalk, Conn65	.60
South Norwalk, Conn65	.60
Bridgeport, Conn50	.45
Stratford, Conn50	.45
New Haven, Conn45	.40
Derby, Conn40	.35
Shelton, Conn40	.35
Ansonia, Conn40	.35
Beacon Falls, Conn35	.30
Naugatuck, Conn25	.20
Waterbury, Conn00	.00

Division No. 5

SPRINGFIELD, MASS., TO	BOSTON.
Springfield, Mass \$.00	\$.00
West Springfield, Mass25	.25
Chicopee, Mass	.15
Chicopee Falis, Mass15	.15
Holyoke, Mass35	.35
Greenfield, Mass50	.50
Westfield, Mass35	.35
Pittsfield, Mass60	.60
North Adams, Mass	.75
Ware, Mass50	.50
Worcester, Mass60	.60
Boston, Mass65	.65
Hartford, Conn50	.50
From Boston.	
Springfield, Mass \$.65	\$.65
West Springfield, Mass75	.75

West Springfield, Mass.	.75
Chicopee, Mass	.75
Chicopee Falls, Mass	.75
Holyoke, Mass	.75
Greenfield, Mass	.75
Westfield, Mass	.75
Pittsfield, Mass	.90
North Adams, Mass	.90
Ware, Mass	.75
Worcester, Mass	.00
Boston, Mass	.00
Hartford, Conn	1.00

.75

.75

.90

.90

.75

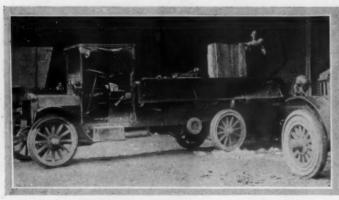
.00

The five companies are motorized throughout. Division No. 5, that operating from Springfield to Boston and return, utilizes motor trucks for picking up and delivering in the cities served by it, but does not make any inter-city deliveries, using the express cars operating nightly over the Boston & Maine railroad. The Boston & Springfield Despatch, as the company is called, handles a considerable volume of business in this manner and finds the automobile indispensable for pick-up and delivery.

Division No. 1, operated by Brocklehurst & Potter, Inc., with a warehouse at West Broad and Worth Streets, New York City, operates a fleet of trucks between New York and Philadelphia and return. The company also has arrangements whereby goods destined for Chester, Pa., Wilmington, Del., Baltimore and Washington are delivered. Terminals are established at New York and Philadelphia, trucks leaving each at 7 P. M. and arriving at their destination at 7 the next morning. Shipments are received at the warehouse of the company up to 6 P. M. and are delivered the following morning. The rates given include picking up and delivery. It is the store door delivery plan in practice. plete description of the Brocklehurst & Potter, Inc., system appeared in our November issue.

Division No. 2, which serves New Jersey, is also operated by Brocklehurst & Potter, Inc. One truck operates between New York City and Dover, N. J., serving intervening points. The truck leaves New York for Dover at 7 A. M., arriving at Dover at noon, and leaves Dover at 3 P. M., reaching New York at 7 P. M. and in time to connect with the Philadelphia division and north bound trucks.

Division No. 4, operated by the Seaver Engineering Corp., with offices and receiving station at 11 Varick Street, New York, truck merchandise from New York to Waterbury, Conn., and return. With the exception of the New England Transport Co., Inc., it serves a greater number of cities and towns. Its trucks leave Waterbury at 6 A. M. daily, picking up on the south bound trip, reaching New York in time to transfer goods



One of the Many Motor Truck Express Lines Delivering Goods to the Loading Platform of the Company



One of the Five-Ton Pierce-Arrow Trucks With Part of Load of War Material Brought From a Plant in Rhode Island

to the New York trucks of Division No. 1 leaving for Philadelphia and points The north bound trucks leave New York for Waterbury daily at 9 A. M., reaching that city about 7 P. M. In addition to the places listed the trucks pick up and deliver in Thomaston and Torrington, Conn., for \$1.35 the cwt. for less-than-ton loss and \$1.25 cwt, for ton lots and over. With the exception of Division No. 2 a minimum rate of \$1 per 100 lb. has been established. The minimum rate for Division No. 2 is 75 cents. Bulky shipments weighing less than 20 lb. per cubic foot of space occupied, are charged for on a basis of 5 cubic feet, equalling 100 lb.

Planned With an Eye to Future

A careful analysis of the plans of the New England Motor Transport Co., Inc., with which this article largely deals, shows that its president and general manager, Mr. Clark, believes that one of the direct benefits of the war will be the establishment of motor truck routes covering a considerable area and including the co-operation with other transportation companies in linking up towns and cities. From the very start Mr. Clark advocated that profitable use of trucks on long hauls is possible only when the trucks are operated both ways with capacity loads. This practice is thoroughly adhered to by this company as well as the other divisions before mentioned.

Mentioned.

Although the accompanying map showing the scope of delivery by the five divisions, and the rate schedule of the company, indicates that its actual daily delivery is New York to Springfield and Worcester, its trucks go to Boston and Providence, R. I., from Worcester—whenever the occasion warrants. In a rough diagram drawn by Mr. Clark for the writer it was shown that the routes covered by the trucks is virtually the backbone of New England traffic. Plans are being perfected whereby the New England Motor Transport Co. will have branches in all of the principal cities and

towns touched by the trucks and of these

Springfield will be the center.

To Increase Radius of Delivery

Eventually the merchandise now hauled to Bridgeport from Springfield and transferred to other trucks at that city

Plain Line Indicates Route
Over Which the Various
Divisions Operate
The dotted lines indicate route

for transferred goods

for Derby, Ansonia, Seymour, Shelton, Naugatuck, Waterbury, Thomaston and Torrington, points in the Naugatuck Valley, will be hauled by the company from Hartford to New Britain, thence to Waterbury for distribution to the places named. No attempt will be made to develop business north of Northampton nor east between New Haven and Providence on the shore road, as trucks returning from Providence go by the way of Plainfield.

The main office and receiving station of the company is at 98 Taylor Street, Springfield, a central location. The loading platform, specially constructed according to Mr. Clark's ideas, faces a large plot of ground so that incoming and outgoing trucks and wagons are not delayed by the conditions generally obtaining at platforms centrally located in cities. The greater part of the merchandise from Holyoke and Northampton is brought to the loading platform by automobiles, small expressing companies, and

mobiles, small expressing comphorse drawn equipment picks up in and around the city. Whenever possible the manufacturer is encouraged to deliver to the platform goods destined for out of town. Of course, bulky or heavy goods are collected and delivered by the company's trucks. Goods received are so arranged for loading that the packages are unloaded easily and in conformance with the order of arrangement of the shipping forms.

The company operates a 2- and 5-ton Pierce-Arrow, a 31/2- and a 5-ton Packard in addition to a semi-trailer. The smaller Pierce-Arrow is equipped to take a three-ton load and frequently is utilized to run to Holyoke to bring in goods on what are termed specials, merchandise too late for the regular expresses and which is to be transferred to the trucks going east or south. The semi-trailer is a 1912 model 6-66 Pierce-Arrow passenger car attached to which is a stake body of 3-ton capacity. Pneumatic tires, 37 x 5, are utilized on the car. This unit is very fast and because of its speed is in demand for special work. It makes trips between Springfield, New York and Boston and has been as far north as Windsor, Vt. Its operating cost is said to be

TORRINGTON

THOMASTON

MAJORIUCH

HAUGATUCH

BEACON FALLS

ANSONIA

OR HAI

ANSONIA

SENTOGEN

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exceptionally low and its service unusually reliable.

The transportation plan of the New England Transport Co. is the outcome of its daily express service between Springfield and Worcester and Springfield and Hartford. This service was developed by Mr. Clark after an exhaustive study of that afforded by the common carriers, railroad and express. Several railroads lead into Springfield and the service afforded by these has been extremely poor since the beginning of the war. Conditions are such that generally goods must be transferred from one road to another, thus necessitating several handlings, to say nothing of many exasperating delays to the consignees.

These were the conditions when Mr. Clark decided that there was more money to be made in selling transportation than the trucks for it. He began with a 2-ton Autocar in the express work

mentioned and later added a 21/2-ton Kelly-Springfield.

The initial business of the company was built on a foundation of advertising within a radius of 25 miles. A strong form letter was sent to manufacturers with good results, and this, coupled with a personal solicitation sold a large number of manufacturers who were wed to the old methods, the common carriers. Mr. Clark was ready with prices when soliciting business and through personal attention to detail soon built up a profitable express business. It may be interesting to those who have not made a success with form letters to learn that exactly 50 per cent, of the letters sent out by Mr. Clark sold the service. The letters sold because he made a careful study of conditions before correlating his facts. One of the facts emphasized in the letters was the quick, store door delivery of goods.

Worked for Return Loads

The possibilities of increasing the scope of delivery and transportation, coupled with the increasing demand for the service of his trucks, led Mr. Clark to develop the return load movement. He has made a special effort to bring back raw material to the manufacturer in Springfield and other cities visited by the trucks on the outbound trip. Having obtained the confidence of the local manufacturers he was able to sell his service to those concerns engaged

in war work with the result that it is rare a truck comes over the road empty.

Mr. Clark realizes that the Government work is but temporary and is building for the future. He is confident that before conditions are again normal that transportation companies using motor trucks and possibly trailers (when roads will permit) will be able to successfully cope with the common carriers, that improved loading methods, special bodies, etc., will cut down the present cost of transportation by motor vehicles.

The company is fortunate in having a high grade set of drivers who take an interest in their work and look after the proper lubrication of the various components of the chassis. As yet the company does not maintain a garage or service station, relying upon the agents of the trucks. Two drivers accompany a truck on long hauls, one remaining with the car when the other leaves for meals, etc., avoiding the possibility of anyone tampering with the shipment. The men alternate in driving on these long trips. Drivers are obliged to fill out a petty cash voucher for advance expense money and make a return.

Simple Forms Employed

The forms utilized in handling the shipments, collections, etc., are simple. Each terminal or shipping point bills the outgoing shipments. There are two types of bills, a white with yellow dupli-

cate, both bearing the same serial numher. These are the collect bills, the original being retained by the consignee upon receipt of the goods while the copy is returned to the office. Both bear signature of the driver taking the shipment. collecting the charges and that of the consignee. When the shipment is prepaid a similar double form is employed, the original being pink and the duplicate or copy blue. When shipments are transferred to another division the driver obtains a receipt of the number of packages, etc. This is turned in at the home office. When drivers pick up packages not billed or shipped from terminals a form is made out and the duplicate brought back to the office. No manifest is issued as all duplicates are filed at headquarters. A record of all shipments is kept on a special, loose leaf form. Mr. Clark in speaking of the method says that it conserves time and saves bookkeeping, and the driver is not obliged to wait for a manifest which frequently is held while a clerk adds some late shipment or makes a change,

The large trucks are averaging about 4000 miles a month on long haul work while the smaller cars average 2000 and 3000 miles. One of the 5-ton Pierce-Arrows has averaged 4500 miles monthly since it has been in service.

All trucks are fitted with comfortable, weatherproof cabs and each car carries shovels, cable and large jacks for emergency.

RECORD OF SHIPMENTS New England Motor Transport Co., Inc. For Month of 191 Shipper Kind of Goods Weight Inv. No NEW ENGLAND MOTOR TRANSPORT CO. INCN!NO MOTOR TRUCK TRANSPORTATION CONTRACTORS DAILY EXPRESS SERVICE BETWEEN NEW YORK CITY AND PRINCIPAL NEW ENGLAND CITIES BPRINGFIELD, MASS, 98 TAYLOR STREET TEL WALNUT 2180 NEW YORK CITY 57 HUDSON STREET TEL. SPRING 183 CONSIGNEE SHIPPER 191_ ADDRESS ADDRESS. PIECES WEIGHT RATE DELIVERY CHARGES WAR TAX TOTAL CHARGES PREPAID C nised all articles listed above N. E. MOTOR TRANSPORT CO., INC. Received all the above articles in good order Received at N. E. MOTOR TRANSPORT CO., INC. THIS COPY TO BE RETAINED BY CONSIGNEE

Simple Forms Are Employed by the Company

The record of shipments is kept on a special loose-leaf form. The bill of lading is made out in duplicate, as described in the text of the article

1919 Will be Great Year for Motor Trucks in Automobile Shows Throughout the Country

By A. V. COMINGS

ORE and bigger automobile shows will be held in this country during 1919 than ever before in the history of the trade, and motor trucks will take a part in most of the exhibitions staged by the various dealers' associations throughout the United States. These two facts stand out strongly as a result of the gathering in Cleveland, Nov. 25 and 26, of the National Association of Automobile Show Managers. Optimism over the outlook for the new year, and a determination to make the score or more automobile shows of the early months of 1919 start the country's business ball a-rolling, was expressed by the members of the association. They represent the trade in practically every large and medium-sized city in the country, and they believe that the returning prosperity of the automobile and truck trade will be hastened and made more certain by the very best shows each member can put on in his home city.

The definite decision of the N. A. C. C. not to hold manufacturers' shows in New York and Chicago has brought about quick action by the dealers in those two cities, and dealers' shows will be held in each. Charles A. Stewart, secretary of the Dealers' Association in New York, will manage the New York show, and the Chicago exposition will be managed by Timothy D. Beard, executive secretary of the Chicago Automobile Dealers' Association.

Brooklyn will hold a passenger car show March 22-29 with a truck show in the same building April 1-5.

Trenton, N. J., will hold its show March 17-22, with both trucks and passenger cars on the floor, and possibly tractors if there is room for them.

Indianapolis will erect a temporary building for its show, with passenger cars on the floor the first week and motor trucks the following week.

Boston's plans are still in the air, as Chester I. Campbell, who manages the shows there, has been devoting all his time to the United States war expositions which have been given all over the country. Boston, however, will have a show.

Pittsburgh will have its spring show in March, with both passenger cars and trucks on the floor.

South Bethlehem will have a passenger car show Feb. 17-22 and a truck show the following week, Feb. 24-27.

Des Moines, Ia., will have a whale of a show Feb. 17-22 in the Ford Building in that city, with passenger cars, trucks and tractors all on exhibition. Detroit's big show of both passenger cars and tractors will be held in a tenstory building with exhibits greater than ever before, Jan. 18-25.

Omaha will have a mixed show, with dates yet to be decided on.

Philadelphia will again have a big dealers' show, in keeping with the splendid expositions that city has had in the past. The date is yet to be decided.

Cleveland is planning a tremendous post-war show, with more exhibits than at any previous show held in that city. It will be held in late March or early April.

Newark, N. J., will hold its mixed show Feb. 15-22.

San Francisco's great show will be March 1-10, and both trucks and passenger cars will be shown.

Louisville's show will be held Feb. 15-22.

Columbus, O., will hold a mixed show the week of March 3.

Other cities that will hold automobile shows in 1919, although the dates of their exhibitions have not as yet been set, are as follows:

Kansas City, Milwaukee, St. Louis, Utica, Syracuse, Bridgeport, Ft. Dodge, Ia.; Harrisburg, Pa.; Buffalo, Minneapolis and Hartford.

Pittsburgh held its annual fall show in mid-November under the capable management of "Jack" Bell. Although the weather was unpropitious, the attendance was large and the trade felt the stimulating influence of the show and show advertising immediately. Many sales were made during the week, both at the show and in city salesrooms. A large number of trucks were exhibited at the show, and interest in the commercial cars was far greater than at any previous exhibition.

Exports of Motor Trucks During Fiscal Year Ended June 30, 1918

Estimates made by the Bureau of Foreign and Domestic Commerce show that for the year ending June 30 the total number of motor trucks exported, not including trucks shipped abroad for use of the American Expeditionary Forces, was less than in the fiscal years ending June 30, 1916 and 1917, but materially greater than in 1915 or any preceding year.

The record for the last six years is as follows:

Commercial Cars

Fisca	al															
Year															No.	Value.
1913					0			0	0					e	993	\$1,737,141
1914		0	0		9	٠	0						0		784	1,181,611
1915					0				0		p		0	0	13,996	39,140,683
1916	0				0			0							21,269	56,805,548
1917					0		0	9			0	0			15,977	42,343,503
1918				0		0				0					12,200	31,874,459

Total valuation of passenger and commercial car exports during the last fiscal year, despite war conditions, was \$77,205,825, compared with \$90,956,134 in the twelve months ended June 30, 1917; \$97,465,811 in 1916; \$60,254,635 in 1915, and \$26,574,574 in 1914, the last pre-war



British Use Portable Repair Shops for Their Motor Lorries

The British army has portable repair shops for its motor lorries where all damaged trucks are repaired. This enables them to move from place to place and repair trucks on the spot. Photo shows the Tommies molding various parts for the different machines in the sand.

It will be seen from the following detailed statement of exports by countries that, aside from England and France, whose purchases were mainly for war purposes, the best markets for trucks were: Canada (\$1,381,542), Cuba (\$1,130,982), Chile (\$282,638), Australia (\$163,405), Japan (\$317,787), European Russia (\$1,562,303), Mexico (\$525,664), New Zealand (\$145,764), Philippine Islands (\$215,106), Dutch East Indies (\$162,749), and Spain (\$97,910).

Exports of Automobiles From the United States

Year Ended June 30, 1918.

Countries	ommor	cial Cars
	umber	Value
Denmark	2	
France	2,754	\$ 3,800 10,001,636
Gibraltar	27	58,325
Greece	14	32,000
Iceland & Faroe Is	1	2,245
Italy	52	28,055
Norway	40	133,227
Portugal	12	36,914
Russia in Europe	406	1,562,303
Spain	46	97,910
Sweden	7	10,360
England	4,805	13,438,981
Scotland	447	1,203,328
British Honduras	2	3,700
Canada	1,108	1,381,542
Costa Rica	5	10,245 5,512
Guatemala	6	3,373
Nicaragua		2,509
Panama	47	47,859
Salvador	4	14,811
Mexico	365	525,664
Newfoundland & Labrador		7,250
Barbados	2	3,400
Jamaica	10	6,775
Trinidad and Tobago	14	18,361
Other British West Indies.	28	89,914
Cuba	554	1,130,982
Danish West Indies	2	2,845
French West Indies	26	49,626
Haiti	11	10,578
Dominican Republic	21	13,323
Argentina	51	50,124
Bolivia		24,958
Brazil		31,133 282,638
Colombia		7.100
Ecuador		6,876
British Guiana	7	5,100
Peru		155,834
Uruguay		15,809
Venezuela	16	12,410
China	23	26,236
Chosen		1,629
British India		20,275
Straits Settlements		113,554
Other British East Indies		7,138
Dutch East Indies		162,749
French East Indies		3,500
Hongkong		5,371
Persia		317,787 2,712
Siam	6	4,535
Australia		163,405
New Zealand		145,764
Other British Oceania		2,404
French Oceanla		6,480
German Oceania		5,518
Philippine Islands		215,106
British West Africa	27	20,136
British South Africa		107,085
British East Africa		787
French Africa	. 18	12,963

Highways Transport Committee Investigating the Snow-Removal Problem

A definite program having to do with the solving of the snow removal problem as it may affect adequate highways transport during the coming winter has been formulated by the Highways Transport Committee of the Council of National Defense, and is now being sent out to those States in which this problem figures.

With Food Administrator Hoover and Chairman Hurley of the United States Shipping Board now in Europe arranging for the distribution of America's quota of foodstuffs among the peoples of Europe, the importance of seeing that there is no delay in the movement once these products start from farm or mill to the seaboard, has caused the Highways Transport Committee to call upon its regional, State, district and county organizations to leave no stone unturned looking to the facilitation of such movement.

The snow removal problem, therefore, probably the most vital from the standpoint of the efficient and continuous flow of commodities along the highways, will be given intensive study by the Highways Transport Committees of the States directly affected.

To that end requests have been issued to the organizations in Massachusetts, Maine, Vermont, New Hampshire, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Ohio, Indiana, Kentucky, Michigan, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, South Dakota, North Dakota, Colorado, Wyoming, Montana, Idaho, Washington, Oregon, California and Nevada, that they give immediate attention to the following general subjects outlined by Mr. Raymond Beck, field engineer, relating thereto:

First—Of the powers of the State Highway Department or Commission for removing snow. If such powers are not specifically covered by statutes, whether maintenance funds can be used in an emergency?

Second—What co-operation and work can and will be undertaken by the counties and State? Third—What co-operation and work can and will be undertaken by the municipalities and State?

Fourth—What snow removal machinery, such as scrapers, plows, etc., are available for use by State, county and municipalities?

Fifth—What preliminary measures can be undertaken which will prevent the drifting of snow, such as location and erection of snow fences? Also, the change of rail, board, picket and hedge fences which check the currents of air during a snow storm, thus causing drifts to form, and removal of brush or weeds paralleling the road, which invariably causes drifts to form.

Sixth—Attention by State Highways Department or Commission, through its field organization and in co-operation with the State Highways Transport Committee, of physical conditions along the highways tending to cause drifts. Recommendations as to the best means of dealing with same by preventive methods.

Seventh—The making of snow removal report of every snow storm on such highways as are designated to be kept free from obstruction by snow so as to allow continuous essential highways transportation.

Price Fixing Will Probably End January 1

Price-fixing by Governmental authority probably will be discontinued after January 1

Officials (including some in the War Industries Board) interviewed on the subject, say that price-fixing has answered its purpose; that there is no need for continuing it after January 1. They expressed grave doubts whether any great industry could supply proof of a necessity for increasing prices over the present figures, if the limitation was removed. Most of the fixed prices expire January 1, with some running to February 1.



Service Station on Wheels

The factory service station of the Vim Motor Truck Company, at Sixty-fourth and West End Avenue, New York City, is operating a motor truck which brings service to the owner in the shortest possible time. It is painted bright red and the company finds it a good advertisement.

Business Men Lay Plans for Reconstruction

Important Problems of Labor, Finance, Taxation, and Our Relations With Foreign Nations Discussed. Optimism Pervades Reconstruction Conference

Atlantic City, Dec. 6.—The Reconstruction Conference of Atlantic City, Dec. 3, 4, 5 and 6, was undoubtedly the largest get-together meeting of the business interests ever held in the United States.

The Conference, which was called by the United States Chamber of Commerce, brought together over 5000 delegates representing practically every industry in the country.

The convention was addressed by such men as President Wheeler, of the Chamber; Charles M. Schwab, Secretary Redfield, Mr. Rockefeller, Jr., James A. Farrell, Paul Warburg, of the Federal Reserve Board; Alba B. Johnson, of the Baldwin Locomotive Works, and Edward A. Filene, of Boston. Throughout the convention a note of unmistakable optimism was voiced, together with a spirit of "live and let live" toward labor. In fact, an altruistic spirit on the part of manufacturing interests toward labor and of this country toward all other nations was an index of the modern spirit of American business.

Mr. Schwab briefly pointed out the future business possibilities, contrasting pre-war and present shipping and steel productions. The entire ship output for a year previous to the war was 400,000 tons; the output for the one month of November last was 500,000 tons. There will be eight or ten million tons merchant ships produced the next twelve months, and the United States even now has eight million tons of shipping under its control. Our future Merchant Marine is assured, as shown by the sentiment of the business men.

Forty-five Billion Tons Excess Steel

Of importance to the automobile industry as well as other industries using steel was the statement by Mr. Schwab that we are now producing 45,000,000,000 tons a year more steel than the United States now needs.

Secretary Redfield voiced the sentiment that "America's duty is first to assist in the rehabilitation of Europe." Pointing out that, as we are now the creditor nation of the world, we must see to it that our debtor nations have a chance to again get on their feet; that this winter the world faces partial starvation, that we must assist Belgium, France, Servia, Italy, Poland, Roumania and then Russia. He also spoke of the needs in steel and machinery of France and other nations, showing the tremendous foreign commerce which will be ours if properly handled.

The Labor Problem

Many of the speakers touched on the subject of labor, particularly John D. Rockefeller, Jr., who desires that labor should be represented in the councils of industry, and urged the greatest cooperation on the part of manufacturers with labor. He formulated and presented ten principles upon which business should be founded, and these were adopted and appear among the many resolutions formulated by the Conference

Alba B. Johnson made a plea for a new policy to be introduced in our public financial system and urged that the present revenue tax bill be reduced to \$4,000,000.

The work of the Conference was crystallized into 32 resolutions, the more important of which are herewith published. Some mentioned our duty during the international reconstruction period; others pertained to the maintenance and increase of our port facilities in view of our

coming Merchant Marine. There were, of course, votes of thanks to those who had stirred the convention by their addresses and to the Resolutions Committee, which by its able work so well voiced the sentiments of the Conference that most of the resolutions were unanimously adopted.

Sub-committees in which automobile interests were represented are covered separately in this issue, information being given in regard to the disposition of government trucks.

Gear Men Meet at Atlantic City

Among the numerous sub-group meetings during the great business Reconstruction Conference the gear makers held a meeting at Haddon Hall in conjunction with the War Service Committee. Many subjects were discussed and resolutions were passed advocating among other things a uniform accounting system, better patent laws, tariff and trade standards.

Resolutions Adopted at the Convention

CANCELLATION OF WAR CONTRACTS

It is in the public interest that all war orders placed by any contracting agency of the Government and accepted in good faith, whether formally and regularly executed or not, should, upon cancellation by

tracting agency, be promptly and equitably adjusted and satisfied as if every formality had been observed, and when so adjusted the amount ascertained to be due by the government should be promptly paid to the end that these funds may be utilized by the industries of the country to speed their transition from a war to a peace basis.

If it should be ascertained that legislation is necessary or desirable to accomplish this end, Congress should forthwith enact such legislation.

Officials dealing with questions of adjustment on account of war orders must necessarily be familiar with all the conditions affecting the order. It will greatly promote expedition and the interests of both the Government and private enterprise for the officials who made the contracts to remain in the Government service to participate in the readjustments.

REMOVAL OF RESTRICTIONS OF INDUSTRY

It is in the public interest that all war regulations of industry should be revoked and all war restrictions on industry should be removed as speedily as practicable, save such industries as are engaged in the production, preparation or distribution of foods, feeds and fuel, and such last named group of industries should be freed from war regulations and restrictions as early as consistent with the welfare of this nation and of the Allies.

SURPLUS GOVERNMENT SUPPLIES

Under date of November 29, 1918, the Secretary of War issued a public statement,—
I. e., "To prevent too violent dislocation of industry from the standpoint of both employee and employer, accumulation by the War Department of either raw material or finished product will be distributed when and where liquidation of such supplies will least interfere with the return of industry to normal condition." Such action would seem to insure the stability of the industries affected which fully appreciate this liberal position.

Therefore the War Service Committee of American Industries hereby tender to the War Department their services for their respective industries for the purpose of advising with and assisting the War Department in the disposition of such materials.

FEDERAL TRADE COMMISSION

The Federal Trade Commission was advocated by the President, and was created, as an agency to make the administrations of our trust legislation explicit and intelligible, and to provide "the advice, the definite guidance and information" which business enterprises require. The normal importance of the Commission's task is now tremendously increased by the imperative need for whole-hearted and sympathetic co-operation between the government and industry, especially during the readjustment period and suggests the desirability of the two existing vacancies in the Commission's membership being promptly filled with able men of broad business experience and clear vision prepared to assist actively in discharging these tasks along constructive lines.

INDUSTRIAL RELATIONS

The Convention heartily endorses in letter and spirit the principles of the industrial creed so clearly and forcibly stated in the paper read to it Thursday morning by Mr. John D. Rockefeller, Jr., and urges upon all units of industry—where they may not now be employed—the application of such principles. Without approving or rejecting his particular plan or machinery, the principles advanced by Mr. Rockefeller are as follows:

- 1. Labor and capital are partners, not enemies; their interests are common interests, not opposed, and neither can attain the fullest measure of prosperity at the expense of the other, but only in association with the other.
- 2. The purpose of industry is quite as much to advance social well-being as material well-being, but in the pursuit of that purpose the interests of the community should be carefully considered, the well-being of the employees as respects living and working conditions should be fully guarded, management should be adequately recognized and capital should be justly compensated, and failure in any of these particulars means loss to all.
- 3. Every man is entitled to an opportunity to earn a living, to fair wages, to reasonable hours of work and proper working conditions, to decent homes, to the opportunity to play, to learn, to worship, and to love, as well as to toil, and the responsibility rests as heavily upon industry as upon government or society, to see that these conditions and opportunities prevail.
- Industry, efficiency and initiative, wherever found, should be encouraged and adequately rewarded, and indolence, indifference and restriction of production should be discountenanced.
- 5. The provision of adequate means for uncovering grievances and promptly adjusting them is of fundamental importance to the successful conduct of industry.
- 6. The most potent measure in bringing about industrial harmony and prosperity is adequate representation of the parties in interest; existing forms of representation should be carefully studied and availed of in so far as they may be found to have merit and adaptable to the peculiar conditions in the various industries.
- 7. The application of right principles never falls to effect right relations; the letter killeth and the spirit maketh alive; forms are wholly secondary while attitude and spirit are all important, and only as the parties in industry are animated by the spirit of fair play, justice to all and brotherhood, will any plans which they may mutually work out succeed.
- 8. That man renders the greatest social service who so co-operates in the organization of industry as to afford the largest number of men the greatest opportunity for self-development and the enjoyment by every man of these benefits which his own work adds to the wealth of civilization.

PUBLIC WORKS

The development of public works of every sort, as recommended by the President, should promptly be resumed, in order that opportunity of employment may be created for unskilled labor.

TAXATION

The cessation of hostilities brings to business interests a feeling of deep concern in the matter of taxation. The problems of readjustment are made more difficult through inequalities in the present law.

We believe, therefore, that in the consideration of amendments to the present act,

or the passage of new revenue legislation to the views expressed by organizations of commerce and industry, ability to pay inventory values and proper reserves together with careful survey of the amount of revenue required under the new conditions are matters of vital importance to business interests of the nation during this readjustment period.

INVENTORIES

We urge that Congress give careful consideration to the grave menace now facing all industry due to the fact that both raw materials and finished goods are carried in full measure to meet the extraordinary requirements of the Government and of the people, and that in large part the stocks have been acquired at abnormal cost and are therefore carried into inventories at inflated values, thereby showing apparent profits which have not been realized, and which probably will never be fully realized. These are largely bookkeeping or "paper" profits, and should not be used as a basis for taxation.

We therefore recommend that any tax law shall provide that during present conditions the taxpayer shall be allowed to make a deduction from his apparent profit by way of a reserve for a subsequent shrinkage in the value of merchandise.

We believe that the interests of the Government can be protected against abuse of this privilege by the fixing of a maximum percentage of deduction to be allowed, and by the use of proper methods of inspection and appraisal.

RAILROADS

The Congress of the United States should speedily enact legislation providing for the early return under Federal charters to their owners of all railroads now being operated by this Government under Federal regulations permitting the elimination of wasteful competition, the pooling of equipment, combinations or consolidations through ownership or otherwise in the operation of terminals, and such other practices as will tend to economies without destroying competition in services.

MEANS OF COMMUNICATION

We are opposed to government ownership and operation of telegraphs, telephones and cables.

MERCHANT MARINE

We recommend that the construction of a great merchant marine be continued and amplified, and that its operation under American control be kept safe by such legislation as may be necessary to insure its stability and its lasting value to American industries.

PUBLIC UTILITIES

Public utilities have faced difficult problems, which have been accentuated by conditions arising out of war. The development and efficiency of such a utility as local transportation has immediate importance for every community. It is recommended that the Chamber of Commerce of the United States should appoint a committee to investigate and study the question of local transportation as it relates to the control of rates and service, franchises, taxes, the attraction of capital into the business, and such other questions as the committee may find pertinent. Such a committee should report its recommendations to the Board of Directors of the National Chamber, and the Board should deal with them in accordance with the established procedure of the Chamber.

EUROPEAN COMMISSION

The business men of the United States, having devoted their energies and resources toward the winning of the war, regardless of sacrifices or burdens, in support of the principles for which this country fought, appreciate the necessity of continuance of unremitting effort in order that the world may be restored to normal conditions as quickly as possible and the blessings of peace brought to all peoples.

In the accomplishment of these results the highest efficiency of the great commercial and industrial powers of our own country and that of the Allied nations will be developed only through co-operative effort and common counsel.

In order, therefore, to contribute to the fullest toward the prompt solution of the problem presented, the Chamber of Comerce of the United States is requested to enlist the co-operation of national bodies devoted to the extension and promotion of American commerce and particularly foreign trade, in the appointment of a commission representative of American business, which shall proceed without delay to Europe and establish machinery for the following purposes:

A. To study at first hand the reconstruction needs of European countries in conjunction with business men of these nations in order to advise the business men of the United States as to how they may be most helpful in meeting the necessities of Europe and caring for the interests of American industry and commerce.

B. To be available to the Peace delegates of the United States for any needed information which they may be able to present or for any other aid which may be given by the business men of the United States through the medium of such a commission.

The Chamber of Commerce of the United States also is requested to appoint members of the Commission to represent the business men of the United States at the forthcoming meeting of the Permanent Committees of the International Congress of Chambers of Commerce.

MARKETS FOR FOREIGN TRADE

We strongly urge upon our government the vital necessity of encouraging and developing our foreign trade through all appropriate means possible, in order that the production of industry may afford employment to wage earners and prosperity to the nation.

SOUTH AMERICAN RELATIONS

It has long been the policy of this Nation to cultivate relations of close sympathy with the nations of the Western hemisphere as expressed in the Monroe Doctrine. We believe that these relations should be supplemented and strengthened by a vigorous development of our commercial and financial associations with our neighbors of North and South America.

The Government's control of shipping should be brought to the accomplishment of this purpose as soon as it is consistent with other urgent needs, and the work of the Pan-American Union should be continued and broadened in scope.

PROPERTY RIGHTS IN MEXICO

By provisions in a constitution adopted while much of the country was engaged in civil strife, and through subsequent legislation, Mexican authorities have threatened rights acquired by Americans in good faith, especially in minerals, including petroleum. Against threatened confiscation the American Government made formal protests. The attitude taken by the American Government is heartly commended as in accordance with obvious justice.

EDUCATION FOR FOREIGN COMMERCE

In the larger opportunities which are to be opened to American business men to play a part in the international commerce of the world, the need will be felt for more men who are trained to a knowledge and understanding of the language, the business methods and the habits of thought of foreign lands. Complete success can only come to those who succeed in putting themselves into full accord and sympathy with the peoples with whom they are to deal.

We urge upon our industrials that they take steps to provide opportunities to young men to obtain an education in the practices of overseas commerce and finance and in the practical use of foreign languages.

We call the attention of the various departments of Government and to educators to the importance of this matter and ask that special efforts be made to supplement the valuable work already done and to open up every facility to the furtherance of a successful prosecution of this educational

COST ACCOUNTING

It is the sense of this Convention that uniform cost accounting should be adopted by industries.

COUNCIL AND EXECUTIVE

RESOLVED, That this conference requests the Chamber of Commerce of the United States to appoint a War Service Executive Committee of such number as may seem best to relate the efforts of all the War Service Committees, and to aid in making effective the action of this conference and pledges its assurance to the National Chamber in securing the service on the Committee of such leaders of industry as may be called to act.

RESOLVED, That the chairmen of the War Service Committees of the industries shall constitute a Council to be advisory to the War Service Executive Committee, and to meet from time to time at the call of the Executive Committee or any twenty-five members of the Council.

RESOLVED, That new War Service Committees representing industries not now organized may be recognized by the War Service Executive Committee or by the Council.

NATIONAL TRADE ASSOCIATIONS

The experiences of the war have clearly demonstrated the value of national trade organizations and their service to the country as well as to industry.

This conference heartily approves the plan of organizing each industry in the country in a representative national trade association and expresses the belief that every manufacturer, jobber and producer of raw materials should be a member of the national organization in his trade and cordially support it in its work.

Government Trucks Will Not be Dumped on the Market

Many Will be Required Here. Wide Distribution of Those to be Sold

Atlantic City, Dec. 4 .- On the evening of Dec. 4 the automobile parts and complete unit manufacturers met as a related group of the great Reconstruction Conference at Haddon Hall Hotel, Atlantic City. At this meeting, under the chairmanship of David S. Ludlum, president of the Autocar Company, George M. Graham, chairman of the Motor Truck Committee of the N. A. C. C., the speaker of the evening, pointed out the strength of the automobile industry and its ability to care for itself if left alone. He spoke of the importance of the dealer and that everything depended upon his ability to keep the product

On the subject of the cancellation of contracts, there was little to be said, as the Government's action in this matter has been so rapid that there was little that could now be done by the manufacturers. He also called attention to the fact that the Government had apparently disregarded the advice which it had asked of the industry. He urged that the industry be left severely alone and that it would very rapidly "work out its own salvation" and again place itself on a production basis.

No Job Lots of Government Trucks

Of vital importance to the truck industry is the statement that the authorities at Washington do not intend to sell unshipped government trucks in job lots at low prices, as was feared by some in the industry. That there are now approximately 17,000 government trucks which have not been shipped abroad.

The trucks still to be completed for the Government are variously estimated at from 5000 to 8000, which will bring the total number of unused government trucks up to approximately 25,000. large number of these trucks are on the Jersey meadows, while a still greater number are in the neighborhood of Baltimore. Part of these, it is understood, will still be shipped for the needs of the United States Army which is to remain in Europe, while still others will be used in this country, and those which are sold will be distributed in small lots to various parts of the country and sold at prices which will not be detrimental to the sale of other vehicles. The trucks now owned and operated by the Government will continue to be so owned and operated. Trucks will be needed for some time at the various cantonments, in the parcel post service and by the Post Office Department. He also stated that there was a possibility of the railroads taking up motor trucks as a means of relief from short-haul work.

The subject of "Highways" was discussed, and the meeting placed itself on record as favoring the most extensive development possible, and urged the appointment of a Federal Highways Commission for this purpose.

COMING EVENTS: Be sure and order your January and February issues of the COMMERCIAL CAR JOURNAL early. They will contain complete specifications of 1919 motor truck models.

Government Investigating Cancellations

The Government, following its recent announcement of the cancellation of 50 per cent. of all truck orders, has slightly modified these cancellations. These readjustments were made after investigations held to determine the materials on hand and manufacturing facilities.

Contractors supplying the army are now able to submit any difficulties that may arise in connection with Government orders to a board that has been created for this purpose by the Secretary of War.

The board was created with the intention of eliminating delays and will act without any technicalities of court procedure. A contractor or his representative may appear before the board and state his case and is insured of a prompt decision. Decisions of the board are final, but appeal may be made to the Secretary of War.

The office of the Board of Contract Adjustment is in Washington, but hearings may be held in other places when occasion demands. The legal adviser of the board is a judge advocate, appointed by the examiners, who are commissioned officers of the United States Army and appointed by the Director of the Purchase, Storage and Traffic Division.

The National Automobile Chamber of Commerce is supplying truck manufacturers with circulars explanatory of the procedure to be followed in termination of contracts with the Government.

Liberty Fuel to be Sold January 1

After exhaustive tests in airplane, motorcycle, automobile and truck motors, a gasoline substitute, said to be composed of 80 per cent. kerosene and certain chemicals, will be placed on the market Jan. 1, according to an announcement by Captain E. C. Weisgerber, its inventor. The fuel can be used in place of gasoline without any changes in the carburetor, and it is claimed that it can be produced in quantity for less than one-half the cost of gasoline.

The Bureau of Standards has tested the new fuel, and reports that it has 3 per cent. greater horse-power and 2 per cent. greater efficiency than gasoline.

It is reported that 3000 gallons have been manufactured, being used mostly for experimental purposes.

Although the price of the new fuel has not yet been fixed, it is stated that the ingredients can be obtained readily and at a low cost.

Pull-More Plant to Be Sold.—The plant and equipment of the Pull-More Motor Truck Co., of New Castle, Pa., will be sold by the receiver Friday, Dec. 27, at 2 P. M. A building of brick construction, 100 x 100 ft., with 20 acres of ground, are included.

Enthusiasm Aroused by Highways Transport Day in Colorado

In consequence of the proclamation issued by Governor Julius C. Gunter, Denver and every other city and town in Colorado witnessed the greatest spectacle ever held in that State. Two hundred and twenty-five heavy duty trucks, and a similar number of smaller ones rolled past 100,000 people in the streets of Denver. These trucks were followed by floats, several regiments of troops, women's motor corps and the Red Cross.

The trucks were loaded to capacity with all kinds of food products, one of the trucks carrying the Governor and the Mayor of Denver, while the leading officials of the State followed.

The principle was the moving of food by rural express over the highways, for until the coming of the motor truck the farmer, isolated on a rural highway, was unserved by either rail or water. Secretary Redfield recently stated that "you might build up the railroads until they are ten tracks wide, and fill the rivers with steamers, and still the farmer would not be served." So the farmer must have a more flexible transporting machine, one which will reach his door and carry his produce to the consumer direct.

Colorado has demonstrated in one day, by bringing the consumer and the producer face to face with the problems that are now confronting the world, that, as Hoover says:

"We are never more than sixty days ahead of famine;

"That for ten years we must feed the

"That deaths from starvation will outrival the number of deaths at the front;

"That we must have more food, and that in order to induce the farmer to raise more food we must give him an up-to-date transporting machine—the rural motor express."

And the following results have been obtained:

*Three inter-city truck lines, 35 rural express motor lines operating in Colorado four months ago.

Thirty-five or 40 inter-city lines, more than 100 express lines operating now, employing from one to five trucks.

Lines now operating at profit, formerly at loss through lack of understanding of truck costs.

Thousands of tons of grain, fruit, vegetables, supplies, etc., moved on trucks this year in Colorado, relieving freight congestion and releasing man power.

State districted and sub-divided with men working in every county on transportation.

New impetus given good road agitation through requirements of motor truck travel.

Educational campaign has penetrated into every corner of State.

Thousands of inquiries received and answered on transportation.

Exhaustive data collected on operating costs, road conditions, crops, every phase of transportation in all sections of the State.

Farmers throughout the country will have in use 300,000 trucks by the end of this year, and, according to estimates, will retire 1,200,000 horses. Every horse displaced means five more acres of land that can be devoted to raising food for human beings. Colorado in 1917 had 325,000 horses. The war and the advent of the motor truck has probably reduced this number. Take as a conservative estimate 200,000 horses used on farms or in transportation, which, replaced by motor trucks would mean the use of 1,000,000 acres needed to support the animals for raising food.

Several transportation companies already have incorporated and are trying out the new idea of making regular trips daily between towns situated from thirty to fifty miles apart. One of the most recent incorporations is controlled by a group of dairymen from Castle Rock, who have combined their business opportunities with the general advance of economic distribution of farm products in general. The company has several

trucks which make regular trips to Denver, a distance of thirty-two miles, bringing to the metropolis dairy products and returning with a load of small wares to be dropped at towns along the way.

This practice developed through the extension of the suburban motor traffic, and more generally, perhaps, because of the congested conditions of railroad freight traffic due to war shipments.

A Highways Transport Day should be celebrated in every State in the Nation. Rural motor express lines reach out over rural highways. They bring isolated communities together, they make city and country meet, they encourage the farmers to produce more, better food at lower cost.

Five Per Cent Tax on Trucks May be Eliminated

The Senate Finance Committee has eliminated entirely the proposed Federal license tax in the use of automobiles and motorcycles, which ranged from \$10 to \$50 annually in the House bill, according to horse-power, and from \$5 to \$25 under the plans previously adopted by the Senate Committee.

The bill still maintains a tax of five per cent. on passenger cars and trucks, to be paid by the manufacturer, and also five per cent. on new parts sold by the manufacturer. It is hoped that this parts tax may later be eliminated.

The proposed tax of two cents on gasoline has also been stricken from the bill, following a recommendation of the Treasury Department that the total yield of the bill should be cut to \$6,000,000,000,000.

All States Co-operate in Federal Aid Road Act

Legislative assent, required by the Federal Aid Road Act, has now been given by the legislatures of all States except Alabama. The Alabama Legislature meets only quadrennially, and its next regular session will convene in January, 1919, at which time it is expected the necessary legislative assent will be given, according to the annual report of the Bureau of Public Roads of the United States Department of Agriculture. The Governor of Alabama has assented on behalf of the State, as authorized by the act, so that co-operation by the State has not been affected adversely.

Ralston Iron Works, San Francisco, Cal., has taken over the Hewitt-Ludlow motor truck plant, now under construction, and is planning to increase the production of Hewitt-Ludlow 1½ to 5-ton trucks. The Ralston company has also added to its line of manufactures trailers, semi-trailers, pole and lumber dollies and special trailer equipment.



Two Trucks Which Replaced Twelve Teams

These Acme tank trucks, recently purchased by the city of Cleveland from the Englander Motor Company, are capable of carrying five tons of water, which is forced through the pipes by a separate motor-driven centrifugal pump. Before the advent of the tanks, the city employed twelve teams and twenty-four men to do the same work.



EDITORIALS



Truck Makers Should Make Price Announcements Immediately

OW that the trade is somewhat at sea as to whether or not the price of trucks is going up or down, it is timely that something should be done to throw aside all guess work on the part of the dealer and the truck buyer. The dealer on the one hand is not clamoring for trucks, because he does not know what the manufacturer is going to do within the next few months. He is laboring under the constant apprehension of a cut in price and consequently cannot make up his mind as to the quantity of trucks he should contract for.

The buyer is also at sea. As long as the dealer doesn't know what the price might be within the next few months he will simply hold off so much longer, until he can get a guarantee from the dealer that the price will be stable for some time to come.

The consensus of opinion of the truck manufacturers, based on information received from the makers in answer to a letter on this subject, is that the price of trucks will not be materially reduced within the next six months for the reason that they do not anticipate any appreciable reductions in the prices of material and labor. A large number of manufacturers believe it will be a year before there will be any change in prices of materials and labor. Many manufacturers are short of material and hence cannot expect to be in production in less than a year. In the meantime they should be able to estimate their probable production and settle on a price.

It is Not a Question of Whether the Price is a Little Too High or a Little Too Low, But How Long is That Price to Be Continued.

It is the prospect who is now in the market for a truck that must be considered. He is ready to buy, but is holding off because of the uncertainty as to price conditions. And if the dealer cannot give him any satisfaction—who can? And how can the dealer expect to hold the good will of his prospect and look forward to repeat orders when he sells him a truck now, if in a few weeks' time the buyer finds that the truck he bought can be bought for a few hundred dollars less? Such conditions will not lead to any wholesome relationship between the dealer and the manufacturer and less between the dealer and the buyer.

Therefore it is up to the truck builder to get busy at once and let his dealers and the truck-buying public know what he intends to do. He should announce his prices and a definite period during which these prices

will hold good. This will immediately give the dealer confidence and an opportunity to go after his prospects with positive facts in hand. This is no time to pussy-foot around and see what the other fellow is going to do, but to get busy and settle on a price and a period during which that price will be maintained.

The Low-Priced, Quantity-Produced One-Ton Truck

N certain quarters of the trade a little alarm has been felt at the prospect of a certain manufacturer of a low-priced, quantity-produced one-ton truck flooding the market with his product. The belief is that the resultant competition will be very serious to the present high-grade one-ton truck manufacturers and to those who are building a one-ton truck as a part of their regular line of heavier models. Upon first impression, it looks as if the manufacturer of a one-ton truck selling above \$600 might as well discontinue making that particular model. The facts of the case, however, do not appear to substantiate this probable condition.

A circular letter addressed to manufacturers of higher-priced one-ton trucks elicited some very interesting answers. With the exception of a few cases the trade is not alarmed over the quantity-produced low-priced one-ton truck. The consensus of opinion of the manufacturers of higher-priced one-ton trucks is that the cheap one-ton truck will pave the way for sales of a substantial product that will last and be cheaper in the long run. Undoubtedly the low-priced one-ton truck will have a large sale and it is probably true that a certain percentage of the buyers will buy this truck who might buy a heavier and higher-priced truck if the cheaper truck were not on the market. The general belief, however, is that the cheap truck and truck attachments are really a benefit, acting as an educator for the truck user, and that the high-grade one-ton truck maker, building a better article, will eventually reap the rewards of his efforts by the purchaser buying in each successive case a better truck.

A number of manufacturers feel that the seriousness of the situation has been overestimated and that the cheap one-tonner will prove of but little consequence so far as interference with the sales of the highgrade truck is concerned. The cheap one-ton truck will teach its users the benefits of motor-truck transportation, develop them into prospective users of good trucks and of trucks with greater carrying capacity. The marketing of a large quantity of these low-priced trucks may create a temporary setback in the one-ton field, but in the long run it is likely to prove beneficial.

Who is to Blame for Overloading?

It is not the policy of this publication to print statements in its reading columns which encourage or endorse the practice of overloading. But the editor and his associates are only human, and once in a long while a statement savoring of overloading is liable to get by. Despite all the admonitions against overloading given by the trade papers many truck operators still persist in this practice. Probably there is a reason for it.

Many truck builders, tire makers, etc., are constantly giving advice against overloading. The truck builder is anxious that the truck he sells should live up to its reputation, and give the service for which it is designed. But on the other hand he is proud of the fact that his truck will stand a great deal of overloading, and many a car manufacturer's publicity department is guilty of sending out publicity and press matter that greatly exaggerates the carrying capacity of that particular make of truck.

The truck operator is not always to blame: some of the large fleet owners, department stores, for instance, particularly during rush seasons, don't give

a hang how they overload their trucks. The order given by the traffic manager to the drivers is, "Deliver the goods, to h— with the trucks." With such actions on the part of the owners, can you blame the manufacturer?

However, there is one branch of the industry which we thought would positively discourage overloading, and that is the parts manufacturer. But even the parts maker does not like to admit to the public that his unit of the construction will not stand overloading.

Recently a parts manufacturer took exception to our publishing a statement that a certain truck could be geared to take greater than its capacity loads, claiming that if users of said make of truck took to overloading, his parts would break as they were not built for overloads. We asked this maker to send us a letter for publication, condemning the overloading abuse and its effect on the parts makers' business. Imagine our surprise when we received a reply stating that his contract is with the manufacturer, and he would rather not scold the public for overloading.

Again we say-Who is to Blame?

A Review of the Activities of the Motor Transport Corps

Eighty-Two Thousand Five Hundred Trucks Completed for Army. Estimated Expenditure for Motor Equipment, \$732,000,000

OTOR equipment which, according to General Pershing and such Generals of the Allied armies as Foch, Haig and Petain, played such a vital part in making successful various strategic engagements during the great war, thus making final victory possible, is discussed at length in the annual report of the Secretary of War to the Congress in connection with the organization and activity of the Motor Transport Corps. The report of the Secretary goes into the changes put into effect as to purchases of motor equipment, the abandonment of the old bureau system of buying, and the other changes which followed. He discussed General Pershing's request that a motor transport service be organized, the steps leading up to the same, the personnel, functions of the department, etc., and continues:

Finance

The value of the automotive equipment carried over from the fiscal year 1918 amounted to \$353,000,000. The appropriation for motor transportation for the fiscal year ending June 30, 1919, is \$886,000,000. Of this amount there has been or will have to be expended on contracts which cannot be canceled \$350,000,000. For the repair shop and equipment program a further expenditure of

\$29,000,000 will be necessary, and additional expenses incident to demobilization and liquidation of the vehicles left on hand are estimated at \$6,000,000. Equipment estimated to be carried over to the next fiscal year, 1920, represents an expenditure of \$732,000,000, the present value of which is not known, but a large part of the \$350,000,000 expended out of the 1919 appropriation should be of continued use to the Army or saleable without loss.

Accomplishments

The trucks completed to date, traveling at the rate of 20 miles an hour, would consume almost six days in passing a given point, and if placed end to end would reach a distance of 2,750 miles, or from New York almost to San Francisco. The average truck travels about 30 miles per day. This means that all the trucks completed to date would cover a distance each day equal to 100 times the circumference of the earth.

To date there have been completed for the Army 82,500 trucks, standardized and commercial types, 16,000 motor cars, 27,000 motorcycles, 22,000 bicycles, and a great number of trailers to be attached to the trucks.

There are on hand overseas more than 55,000 motor vehicles, and in the month

of October alone 17,500 were shipped to the American Expeditionary Force, while there were available for shipments overseas on November 1, 1918, 12,000 additional motor vehicles.

The convoy service of the United States, although formed primarily for training purposes, has since its organization taken overland more than 14,500 trucks, the greater part of which carried freight in the shape of spare parts and motor equipment.

Summary

The Motor Transport Corps, under the present plan, is merely an operating corps, the procurement and the supply of motor equipment being attended to by a division of the Quartermaster Corps. During the period of the war, however, everything connected with the motorization of the Army was at some time handled by the Motor Transport Corps, and its strength and activities are shown in the following table:

Strength and Activities of the Motor Transport Corps.

Total personnel:	
Officers	2,717
Enlisted men	76,917
Training school capacity:	
Officers	300
Enlisted men	23,300

Finances:

Production: Trucks 82,490 Other motor vehicles

Estimated expenditure\$731,908,462 Estimated balance\$501,698,824

Of the artillery tractors, tanks and Tank Corps, Secretary Baker says:

Artillery Tractors

The results of the war have also served the interests of peace in the development of small caterpillar tractors to replace horses used with heavy artillery. There have been designed and put into production 10-ton, 5-ton and 21/2-ton tractors. Large tractors had for some years been used extensively in farm work, lumbering, etc., where heavy hauling must be done over rough ground. It is probable that the small tractors which have been developed under the pressure Freight cars required ... 30 4,000

of war needs will be extremely useful in tasks where a smaller unit would be

To carry through the production required, new plants and plant extensions. to the value of about \$400,000,000, have had to be erected under the direction of the Ordnance Department. The number of contracts placed during the fiscal year was approximately 16,000, of an aggregate value of \$5,000,000,000. The extension of work between July 1, 1917, and July 1, 1918, is indicated by the figures

Growth of Ordnance Operations in One Year.

Square	feet	of	July	1, 1917 J	uly 1, 1918
space	avail	able		970,000	4,320,000
Tonnage	freig	hted	preced-		
ing m	onth			500	100,000

think about, and pointed the way to carrying the manufacturers and dealers through the transition period without excessive loss.

The next meeting of the association will be held at the Gibson Hotel in Cincinnati, Jan. 17th and 18th, 1919.

Demand for Gasoline Increasing

The effect of the signing of the armistice upon the overseas demand for military transport grade of gasoline has been to increase rather than diminish it, according to the United States Fuel Administration, which has been making an exhaustive study of the subject.

Commenting upon this investigation. the Fuel Administration makes the interesting announcement that the military transport grade and the two aviation qualities are the chief items in the overseas demand upon American sources of supply, and that aviation demands have greatly decreased.

The Fuel Administration, discussing this subject, continues:

"These factors, as well as domestic re quirements, will have a considerable bearing on any decision as to whether it is desirable to fix a standard of quality for domestic motor gasoline.

"The Fuel Administration has in hand the results of a very exhaustive investigation of gasoline, which was made in considering the existing specifications for aviation grades. The fixing of a domestic motor standard involves much more than the arbitrary determination of specifications, depending upon the question of ability to supply and the consideration of prices of all petroleum products, which are directly affected by any alteration of gasoline grades."

Truck Sales Managers Have a Live Organization

The National Association of Motor Truck Sales Managers has established its office at 1344 Wells Building, Milwaukee. The business of the organization will be transacted there by J. M. Carney, who has been elected executive

Interest in the association was evidenced at the last meeting, held in Buffalo, Nov. 15 and 16, by the attendance of not only all former members but of several who have joined since the previous meeting.

Each session of the association seemingly presents a program of more vital interest to the truck sales managers than the previous one, and the subjects considered at the Buffalo meeting have furnished the members with some very pertinent reasons for thought in connection with post-war sales programs.

The Buffalo members of the association, headed by T. R. Lippard, of the Stewart Motor Corporation, and W. A. Clare, of the Atterbury Motor Car Co., cared for the members and their guests in a most cordial manner.

The address by R. C. Sykes, of the Troy Wagon Works, was one of the most interesting of the session, and will doubtless go a long way towards bringing about that co-operation between truck and trailer manufacturers that will eventuate in an increasing use of trailers in solving transportation problems, wherein motor trucks are the chief factors.

The standardization of motor truck bodies was handled in a very able paper by D. B. De Weese, of the Kilbourne & Jacobs Mfg. Co., and the ideas he brought out in his paper will doubtless form the basis for future action along

At the banquet tendered the members of the association and their guests on the evening of the first day, George C. Diehl, Erie County Highway Engineer, spoke in connection with the good roads movement, with which truck manufacturers just now are deeply concerned. The principal point in Mr. Diehl's address concerned an early standardization as to rear axle loads, loads per wheel and width of tires. He suggested that the sooner truck manufacturers give highway engineers standard figures on these three requirements, just that much sooner will the engineers be enabled to build highways that will accommodate maximum motor truck transportation without undue highway deterioration.

C. A. Musselman, who has been at the head of the Return Loads Bureau of the Highway Transport Committee of the Council of National Defense, spoke at length on the need of the widest cooperative selling effort in connection with highways transportation by motor truck. This is a movement in which the average motor truck dealer has evinced little interest to date, yet it concerns him deeply from the sales standpoint. Mr. Musselman's address was given the closest attention by those present, and there is little doubt that it will result in a determined effort put forth through the medium of local dealers to sell highways transportation throughout the United States as an intensive sales auxiliary to truck sales campaigns.

George Graham, Pierce-Arrow truck sales manager, who has been in closest contact with the war activities of the National Automobile Chamber of Commerce at Washington, gave the members a first-hand impression of immediate conditions in the motor truck manufacturing industry as affected by the war's end and military truck order can-Mr. Graham's address gave the members of the association plenty to

Jobbers Will Hold Convention

The convention of the National Association of Automobile Accessory Jobbers which was cancelled, at the request of the War Industries Board, as a war conservation measure, has been put back on the boards. It will be held Dec. 16, 17

Directors and committees will meet on the 16th and general sessions will be held on the 17th and 18th. No exhibit will be held.

Important Rulings on Rubber Amended

The War Trade Board announces, in a new ruling (W. T. B. R. 335), that War Trade Board Ruling 248, issued October 3, 1918, under which the total importations of rubber to be licensed during October, November and December, 1918, were limited to 25,000 tons, has been amended to permit the licensing of 7,500 tons additional prior to January 1, 1919. The amount so licensed will be allocated by the War Trade Board.

Who's Who in Washington War Work

Organization of Government Committees With Which the Automotive Industry is Concerned

Council of National Defense

Secretary of War, Chairman.

Secretary of Navy.

Secretary of Interior.

Secretary of Agriculture.

Secretary of Commerce.

Secretary of Labor.

Grosvenor B. Clarkson, Acting Direc-

Advisory Commission

Under the act creating it the commission acts as a body for research and investigation, and is charged with the co-ordination of industries and resources, for the national security and welfare, and with the creation of relations, which will render possible, in the time of need, the immediate concentration and utilization of the resources of the nation.

Daniel Willard, President, B. & O. R.

R., Chairman.

Howard E. Coffin, vice president, Hudson Motor Car Co.

Julius Rosenwald, president, Sears, Roebuck Co.

B. M. Baruch, banker.

Dr. Hollis Godfrey, president, Drexel

Samuel Gompers, president, American Federation of Labor.

Dr. Franklin Martin, Secretary of Gen. American College of Surgery.

Walter S. Gifford, Director.

Grosvenor B. Clarkson, Secretary.

War Industries Board

This board is sort of a clearing house for the arious committees which are in close touch various committees which are in close touch themselves with the manufacturers of all kinds of war materials. It does not deal directly with the Automobile Industry, but acts through the National Automobile Chamber of Commerce.

B. M. Baruch, Chairman.

Rear Admiral Frank A. Fletcher,

Major Gen. Geo. W. Goethals.

Hugh Frayne, labor.

R. S. Brookings, Chairman Price Fixing Committee.

J. L. Replogle, steel.

Judge E. B. Parker, Priorities Committee.

G. N. Peek, finished products.

L. L. Summers, technical advisor.

Alexander Legge, vice chairman.

H. P. Ingels, secretary.

Judge Albert C. Ritchie, Gen. Counsel.

Priorities Committee

Matters relating to priorities should be taken up by correspondence or interview with the sec-retary first, who will then refer you to the proper member of the committee.

Judge E. B. Parker, Priorities Commissioner.

C. K. Foster, vice chairman; public utilities, other than steam railroads, street and interurban railways, light and power plants, water works, highways, wharves and docks, electrical energy, turbines and large electrical equipment.

George Armsby, Agricultural Implements; food products and containers, mining equipment, pig tin, tin plate.

H. H. Barbour, iron and steel products, sub committee on rating.

F. G. Macpherson, all incomplete applications, and correspondence relating thereto, sub-committee on rating.

Rear Admiral N. E. Mason, Ordnance for U. S. Navy; co-ordinating member representing Navy, requirements Allies.

Col. C. A. McKenny, Ordnance for U. S. Army; co-ordinating member representing Army General Staff.

Everett Morss, copper, wire rope, woolen and cotton goods, tubing, etc.

L. P. Ordway, oil-well and gas machinery, abrasives, lumber, etc.; sub-committee on rating.

T. C. Powell, railroad equipment and supplies, representative of Railroad Administration.

Rear Admiral A. V. Zane, Navy work other than ordnance.

Maurice Hirsch, secretary to the com-

Henry Krumb, mach. and supplies, rubber and rubber goods.

W. W. Chase, Emergency Fleet work. J. M. Hopkins, export matters.

Percy Holbrook, member sub-committee on rating.

Price-Fixing Committee

Robert S. Brookings, Chairman.

B. M. Baruch, Chairman, War Industries Board.

Hugh Frayne, Labor Representative, W. I. B.

H. A. Garfield, Fuel Administrator.

Ex-Gov. H. C. Stuart, agriculture. Lt. Col. R. H. Montgomery, Army Representative.

Commander J. M. Hancock, Navy Rep-

W. B. Colver, Chairman, Federal Trade Commission.

Dr. F. W. Taussig, Chairman, Tariff Commission.

W. W. Phelps, Secretary.

Requirements Division

Alexander Legge, Chairman.

B. M. Baruch, ex-officio.

Judge E. B. Parker, Priorities.

G. N. Peek, finished products.

J. L. Replogle, steel.

L. L. Summers, technical advisor.

C. H. MacDowell, chemicals.

Pope Yeatman, non-ferrous metals. Col. G. H. Estes, Army Representa-

Adm. C. J. Peoples, Navy Representa-

Capt. M. N. Taylor, Navy Representa-

Lt. Col. C. C. Bolton, Rep. General Staff.

Maj. Seth Williams, Marine Corps Representative.

G. M. Brill, Emergency Fleet Repre-

T. F. Whitmarsh, Food Administration

Representative. M. B. Poole, Red Cross Representative.

C. T. Powell, Railroad Administration Representative.

P. B. Noyes, Fuel Administration Rep-

J. A. Carr, Representing the Allies. W. E. Guylee, Executive Secretary.

Conservation Division

Conservation Division

Its function is "the studious conservation of the resources and facilities, by means of scientific, commercial and industrial economies." Plans for eliminating the non-essential uses of labor, material, equipment and capital are being put into effect by this board in many industries. At the suggestion of the division, the War Service Committee of Automobile Dealers drew up a program for saving labor and materials in their business. The Committee decides on the details of the program, however, and is putting it into effect, without any action being taken by the Division. The Conservation Division is entirely in sympathy with the general purpose of the educational campaign being conducted by the W. S. C. of A. D. The Division in continuing its work with retail stores to secure economy in delivery services, and merchants in many parts of the country have put the Division's program into effect. With the co-operation of the War Service Committee of the Rubber Industry a program for the standardization of automobile tires has been worked out. This division assumed charge of the work of the Commercial Economy Board on May 8th, 1918.

A. W. Shaw, Chairman

A. W. Shaw, Chairman.

M. T. Copeland, Secretary.

Automotive Products Section

This section has jurisdiction over the following line of automotive material, including combustion engines and their application, their accessories, parts, etc. With the exception of agricultural tractor, stationary and portable engines, for agricultural purposes; motorcycles, sidecars, motor cars, motor ambulances, motor trucks, motor truck bodies, motor truck tractors, motor truck trailers, armored cars, military tractors, military tanks, airplane engines, marine gas engines, stationary gas engines and automotive accessories and parts.

This section also passes upon the purchases of automotive materials for the Allied Governments, and their allocation to the different concerns. This section has jurisdiction over the following

cerns.

Application for priorities certificates covering automotive materials are referred by the Priorities Committee to this section for advice and recommendation

C. C. Hanch, Chief. D. C. Fenner, Assistant. H. O. Smith, Assistant.

Aircraft Board

Fourth and Missouri Ave.

This committee should be communicated with in the first instance in regard to any matter pertaining to airplanes, etc. There are many departments dealing with materials, supplies, etc., located at the Signal Corps, Aviation Section office at 119 D St.

J. D. Ryan, Chairman.

R. F. Howe.

W. C. Potter.

Maj. Gen. W. M. Kenly.

E. A. Deeds.

Col. R. L. Montgomery.

Rear Adm. D. W. Taylor.

Capt. N. E. Erwin.

Lt. Com. A. C. Atkins.

Capt. H. M. Darling, Act. Secretary.

National Automobile Chamber of Commerce

Second National Bank Building. 509 Seventh St.

Hugh Chalmers, Vice-President of the N. A. C. C., is acting as Washington representative of the N. A. C. C. members. A staff consisting principally of engineers is assisting Mr. Chalmers in giving information to automobile manufacturers in connection with Government work. Alfred Reeves, Gen. Mgr. of the N. A. C. C., spends a large part of his time in Washington, in connection with the various interests of the automobile industry.

Highways Transport Committee 944 Munsey Bldg.

944 Munsey Bldg.

This committee was appointed by the Council of National Defense, to assist in making most efficient use of highways as one of the means of strengthening the Nation's transportation resources. The most important policies thus far adopted are: (1) To increase highways transport resources, and curtail waste by eliminating the running of vehicles empty. Return Load Bureaus have been established for this purpose. (2) To make more food available and save farm labor for work on farms. Rural Motor Truck Express routes for agricultural areas to consuming centers or important shipping points are advocated. (3) To make highway transportation more economical and effective by encouraging the use of power driven vehicles. Such vehicles conserve man power and increase transport capacity, and their general use is therefore endorsed. (4) To assist the Railroad Administration in the elimination of the terminal congestion. Development of the "Store-Door-Delivery" plan will provide terminals with this relief.

Roy D. Chapin, Chairman.

G. H. Pride.

H. G. Shirley.

R. C. Hargreaves, Secretary.

Advisory to Highways Transport Committee

Raymond Beck. Thomas D. Knight. T. D. M. Cardeza.

C. A. Musselman. C. W. Reid.

Motor Truck Committee of the N. A. C. C.

This Committee was organized for the purpose of co-operating with the Highways Transport Committee, in matters pertaining to motor truck haulage, and to give to builders of motor trucks of the United States such assistance as they may call for. It carries the authority of the N. A. C. C.

George M. Graham, Chairman.

W. T. White. M. L. Pulcher.

David Ludlum.

D. C. Fenner.

S. A. Miles, in charge of rural motor delivery feature of the committee's activities.

United States Highway Council

All functions of Government agencies relating to streets and highways are co-ordinated in this body to eliminate delays and uncertainty incident to taking up each problem with a separate department of the Government.

L. W. Page, Department of Agriculture, Chairman.

Lt. Col. W. D. Uhler, War Department.

C. G. Sheffield, Fuel Administration.

R. L. Humphrey, W. I. B.

G. W. Kirtley, Railroad Administration.

J. E. Pennypacker, Secretary.

Motors Division, Quartermaster Corps

This division procures motorized vehicles for the Motor Transport Corps.

Col. Fred Glover, Chief.

Maj. Guy Hutchinson, Executive Offi-

Col. E. S. George, Assistant Chief.

Maj. A. H. Zacharias, Production Assistant.

Maj. C. S. Dahlquist, Technical Assistant.

Procurement Branch

Maj. A. H. Browne, A and B trucks. Capt. A. C. Keleher, Militor trucks.

Maj. W. T. Fishleigh, AA trucks, ambulances, automobiles.

Maj. R. Miller, Jr., special vehicles, motorcycles, bicycles.

Guy Morgan, spare parts, accessories, tires.

P. W. Tracy, trailers. James Morrison, bodies. Lt. W. J. Kennedy, orders. D. F. Hess, priorities.

Capt. E. P. Hangliter, gauges.

Administrative Branch

Capt. S. P. Dean, Chief. Capt. A. D. Stansell, Office Control.

W. A. Dickey, Personnel.

D. G. Blair, Clearances. A. G. Drefs, Finance and Statistics. Capt. H. M. Lowy, Trucks.

District Offices

Maj. M. B. Edgerton, Chicago. Capt. D. S. Devore, Cleveland. Maj. E. L. Jaco, New York. Maj. G. D. Wilcox, Detroit.

Motor Transport Corps Seventh and B Sts.

This Division has charge of engineering, operation and maintenance of all motor vehicles except tanks, caterpillars and other artillery tractors, for all divisions of the United States Army in this country, as well as overseas. Also supervises maintenance, operation and inspection of motor-driven vehicles, motor repair shops and garages.

Brig. Gen. C. B. Drake, Director. Col. J. F. Furlow, Asst. Director. Col. C. Seamon, Asst. Director. Col. W. H. Noble, Asst. Director.

United States Railroad Administration

W. G. McAdoo, Director General. Regional Directors:

A. H. Smith, Eastern Territory, Grand Central Terminal, New York City.

N. D. Maher, Pocahontas Region, Roanoke, Va.

Winchell, Southern Division, B. L. Healey Bldg., Atlanta, Ga.

R. H. Aishton, Northwestern Territory, 226 W. Jackson Blvd., Chicago, Ill.

Division of Capital Expenditure. **United States Railroad** Administration

Robert S. Lovett, Director.

United States Employment Service. Department of Labor

Main Office, 916 16th St., N. W., Washington, D. C.

John B. Dinsmore, General Director. C. T. Clayton, Asst. Gen. Dir.

N. A. Smyth, Act. Asst. Dir. Gen., Sec. of Policies and Planning Board, Chief Common Labor Section.

T. B. Powderly, Chief, Division of Information, Administration and Clear-

M. A. Coykendall, Chief, Division of Farm Service.

W. E. Hall, Chief and National Director of Public Service Reserve and Boys' Working Reserve.

R. W. Babson, Chief, Division Inquiry and Education.

I. W. Litchfield, Chief, Clearance Section (Skilled Labor)

S. W. Mason, Chief Clerk.

James L. Hughes, Asst. to Dir. Gen.

District Superintendents

District 1-H. A. Stevens, 53 Canal St., Boston, Mass.

District 2-J. R. O'Leary, 22 E. 22nd St., New York City.

District 3-J. C. Saylor, Old Federal Bldg., Wilmington, Del.

District 4-J. W. Reynolds, Cleveland,

District 5-Ralph Izard, 810 E. Main

St., Richmond, Va.
District 6-Cliff Williams, Meridan,

District 7-P. L. Prentis, 116 N. Dear-

born St., Chicago, Ill. District 8-C. C. Kavanaugh, Little

Rock, Ark. District 9-James O'Rilly, 406 Metro-

politan Life Bldg., Minneapolis, Minn. District 10-A. L. Barkman, Kansas City, Kans.

District 11-H. W. Lewis, Smithville, Texas.

District 12-W. T. Boyce, Claus Spreckles Bldg., San Francisco, Cal.

District 13-E. C. Snyder, First Ave. and Main St., Seattle, Wash.

SERVICE BUREAU OF THE

COMMITTEE ON PUBLIC INFORMATION

FIFTEENTH AND G STREETS WASHINGTON, D. C.

Information available as to Officials, Functions, and Location of all Government Departments

COMING EVENTS

Dec. 18-New York City. Motor Truck Assn. of America, monthly meeting. Automobile Club of America, 247 W. 54th St. Jan. 12-24—New York City. Mid-winter

meeting Society of Automotive Engineers. Hotel Astor.

Jan. 17-18-Cincinnati, Ohio. Meeting National Assn. Motor Truck Sales Managers. Gibson Hotel.

Jan. 18-25-Detroit. Tractor and passenger car show.

Feb. 10-15-New York City. Motor truck show, Madison Square Garden, under auspices Automobile Dealers' Association. Charles A. Stewart, Manager,

Feb. 15-22-Newark, N. J. Truck and passenger car show

Feb. 17-22-Des Moines, Ia. Truck, tractor and passenger car show.

Feb. 24-27-South Bethlehem, Pa. Motor truck show.

Feb. 24-Mar. 1-Kansas City, Mo. National Tractor Show. Kansas City Tractor Club. 25-28-New York City. American Road Builders' Assn. Sixteenth annual conven-

tion. Hotel McAlpin. Mar. 1-10-San Francisco. Truck and passenger car show.

Mar. 17-22-Trenton, N. J. Truck and passenger car show.

Apr. 1-5-Brooklyn, N. Y. Motor truck show.

Latest Prices of Various Capacities of Gasoline and Electric Commercial Cars—Gasoline and Electric Truck-Tractors Included

This list gives the latest price of each model produced by the manufacturers of Commercial Cars, corrected up to the 1st of each month preceding date of issue. New prices in this issue are in bold-face type.

The last column of figures gives the date and page of previous issues of the Commercial Car Journal in which complete specifications are given. Unless otherwise noted, the month given is within the last year. In the department of "New Commercial Cars" page, will be found particulars concerning new models or changes in specifications occurring during the month.

Maker & Model Price cations	
Maker & Model Price cations	
1-ton\$1950 Feb23	
2-ton	
4-ton3650 Feb33	
All American All American All American	
1-ton 1950 Feb. -23 2-ton 2750 Feb. -27 3½-ton 3650 Feb. -33 4-ton 4050 Nov. -27 All-American—All-American Truck Co. AA, 1-ton 1295 Sept. -33 American—American Motor Truck Co. Truck Co. Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American Motor Truck Co. As 1-ton 1295 Sept. -33 American—American 1-ton 1295 Sept. -33 American 1-ton 1-	
AA 1-ton 1995 Sept -22	
American Motor	
Truck Co.	
2½-ton3250 Feb33 3½-ton3750	
3½-ton3750	
5-ton4750	
Armleder—O. Armleder Co.	
2-ton2900 Jan37	
3½-ton3850 Jan43	
5-ton	
19, %-ton1135 Apr50 Atterbury—Atterbury Motor Car	
Co.	
114-ton 2575 Ian -25	
2-ton 2975 Jan -37	
2-ton long w.	
b	
31/2-ton3875 Jan43	
Co. 1½-ton	
b	
5-ton4975 Autocar—Autocar Co.	
21F, 1½-2-ton. 2050 Jan37	
21F, 19-2-ton. 2000 Jan 37 Available—Available Truck Co. 1-ton 2250 Feb23 2-ton 2950 Feb27 3½-ton 4200 Feb33 5-ton 4900 Feb37 Beck—Beck-Hawkeye Motor	
2-ton 9950 Feb23	
314-ton 4200 Feb22	
5-ton 4900 Feb 37	
Beck-Beck-Hawkeye Motor	
Truck Wks.	
A, 1-ton 1550 B, 1½-ton 1950 Feb27 C, 2-ton 2250 Feb27 D, 2½-ton 2600 Beil—Beil Motor Car Co. G, 1200 lb 1150 Jan30	
B, 1½-ton1950 Feb27	
C, 2-ton2250 Feb27	
D, 2½-ton2600	
Bell—Bell Motor Car Co.	
G, 1200 lb1150 Jan30	
Bessemer—Bessemer Motor _Truck Co.	
G. 1-ton 1495 Ton 21	
H. 116-ton 1945	
G, 1-ton	
K, 3½-ton3450 Jan -43	
Detnienem—Bethienem Motors	
1½-ton 1965 Aug58 2½-ton 2365 Aug58 3½-ton 3465 Aug58 Brinton—Brinton Motor Truck	
23-ton2365 Aug58	
Palatan Palatan 3465 Aug58	
Co. Brinton Motor Truck	
Co. H 1-ton 1500 Tan 21	
F. 21/2-ton 3000 Jan -41	
Briscoe Briscoe Motor Corn	
B-24 Open b 885	
H, 1-ton 1500 Jan31 F, 2½-ton 3000 Jan41 Briacce—Briscoe Motor Corp. B-24 Open b 885 B-24 Closed b . 910	
Brockway-Brockway Motor	
Truck Co.	
Jz. 1½-ton2600 Jan35	
N3, 2-ton3000 Jan37	
Chevrolet Chovrolet Motor Co	
1-ton Chassis 1978 Figh 00	
1-ton Express 1510 Feb -22	
Brockway	
with top1595 Collier Collier Motor Truck Co. 16, 14 -ton	
Collier-Collier Motor Truck Co.	
16, 1%-ton	
Speed1375	
Truck & Trailer Co.	
Truck & Trailer Co. E. 2-ton 2450 Feb27 Comet—Comet Automobile Co. 1¼-ton 1575 Feb23 Commerce—Commerce Motor Car Co.	
114 ton	
Commerce Commerce Motor	
Car Co	
E, 1-ton1500 Feb23	
E, 1-ton1500 Feb23 Concord—Abbott-Downing Truck & Body Co.	
Truck & Body Co	
1%-ton 2350 Jan -21	
1½-ton2350 Jan31 2½-ton2850 Jan37	
Conestoga-Conestoga Motor	
Truck Co.	
Conestoga — Conestoga Motor Truck Co. 1800 lb 1350 Sept32	
14-ton2250 Jan36	

ontn.	
Specifi-	
Maker & Model Price cations	
Corbitt-Corbitt Motor Truck	
Co. 82000 Jan 22	
D. 114-ton 2400 Jan -35	
C. 2-ton3000 Jan37	
B, 2½-ton3200 Jan41	
A, 3½-ton4000 Jan43	
Co. \$2000 Jan33 D. 1½-ton . 2400 Jan35 C. 2-ton . 3000 Jan37 B. 2½-ton . 3200 Jan37 B. 2½-ton . 4000 Jan41 A. 3½-ton . 4500 Jan43 AA. 5-ton . 4500 Corliss—Corliss Motor Truck Co. 1000 lb. Chassis 715 Feb20 Dart—Dart Truck & Tractor	
1000 lb Chassis 715 Feb -20	
Dart—Dart Truck & Tractor	
Corp.	
E. 1-ton	
CC4, Z-10n 2950 Feb29	
Day-Elder—Day-Elder Motors	
J. 34-ton1045 Jan33	
A, 1-ton1775 Jan35	
B, 1½-ton2015 Jan39	
Corp. J. ¾-ton	
Dearborn-Dearborn Motor	
Truck Co. F, 1½-ton1980 Nov31 Defiance—Turnbull Motor Truck	
F, 1½-ton1980 Nov31	
& Wagon Co	
1%-ton	
& Wagon Co. 1½-ton1995 De Kalb—De Kalb Wagon Co. 2100 Feb. 2100 Feb. 2100	
De Kalb-De Kalb Wagon Co.	
E2, 2-ton2100 Feb29	
E2, 2-ton2100 Feb29 2½-ton2600 Feb31 De Martini—De Martini Motor	
Car Co.	
A17W, 1-ton2250 Feb23	
C17W, 2-ton2750 Feb29	
E17W, 3-ton3650 Feb32	
Car Co. A17W, 1-ton2250 Feb23 C17W, 2-ton2750 Feb29 E17W, 3-ton3850 Feb32 G17W, 4-ton4250 Feb37	
12 1-ton 1650 Feb -23	
13, 2-ton2350 Feb29	
15, 3-ton2775 Feb32	
210, 5-ton4900 Oct74	
C17W, 2-ton .2750 Feb29 E17W, 3-ton .3850 Feb32 G17W, 4-ton .4250 Feb37 Denby—Denby Motor Truck Co. 12, 1-ton .1850 Feb23 13, 2-ton .2350 Feb29 15, 3-ton .2775 Feb32 210, 5-ton4900 Oct74 Dlamond T—Diamond T Motor Car Co.	
Car Co. J5, 1-ton 2125 Feb23 J4, 1½-ton 2550 Feb25 J3, 2-ton 2925 Feb29 LB, 3½-ton 4150 Feb33 R, 5-ton 4950 Feb37	
J5, 1-ton2125 Feb23 J4, 1½-ton2550 Feb25	
J3, 2-ton2925 Feb29	
LB, 3½-ton4150 Feb33	
R, 5-ton4950 Feb37	
Dispatch—Dispatch Motor Car Co.	
G 1500 lb Chas-	
sis1200 Feb21	
Donne Donne Motor Timele Co	
6-ton	
Dodge Dodge Brothers	
1000 lb 1085 Feb20 Dorris—Dorris Motor Car Co. K4. 2-ton 2985 Feb29 Double Drive—Double Drive	
K4. 2-ton 2985 Feb29	
Double Drive-Double Drive	
Truck Co.	
1½-ton, front wheel drive2500 May -49	
2 ton four whool	
3-ton, four wheel drive4000 May -49	
Douglas—Douglas Motors Corp. 1½-ton 2000 Duplex—Duplex Truck Co. E 31½-ton 4000 Feb 32	
1½-ton2000	
Duplex—Duplex Truck Co.	
12, 0 /2 - 0011 1000 1 0000	
Durable—Durable Motor Truck Co.	
B2-18, 11/2-ton 2040 Aug61	
Francis Francis Water Co	
4-36T, 1250 lb, 1195 Jan30 4-36T, 1-ton 1395 Elisworth—Mills-Elisworth Co,	
4-36T. 1-ton1395	
Ellsworth—Mills-Ellsworth Co.	
Facel Facel Motors Co	
25A, 1000-lb 855 Fageol—Fageol Motors Co. 2-ton3300 Feb29	
3½-ton4250	
3½-ton4250 5-ton5100	
Famous—Famous Trucks, Inc. 10. % -ton 800 1-ton	
10, %-ton 800	
11/aton 1690	
2½-ton2550	
1½-ton 1690 2½-ton 2550 Fargo—Fargo Motor Car Co. P. 2-ton 2200 Feb29	
P, 2-ton2200 Feb29	

Maker & Model Price	Specifi- cations	Ma
Endanal Wadamal Maten		Ha
Co.	Tab 09	K
T. 1%-ton2350	Feb23 Feb25	He
U. 2-ton2600	Feb25 Feb29	
Co. S. 1-ton\$1900 T. 1½-ton2550 U. 2-ton2600 W. 3½-ton3350 X. 5-ton4400	Feb33 Feb37	N
Ford—Ford Motor Co.	Feb23	N
T, 1-ton 550 F. W. D.—Four Wheel		He
Auto Co.		G
B, 3-ton4600 Fulton—Fulton Motor T	Feb32	
E.X. 176-100 1850	18 n - 35	HIE
Gabriel—Gabriel Motor 'Co.	Truck	A
C, 1-ton1950 E, 2-ton3250 F, 3-ton4300		
E, 2-ton3250		Ho 1
	Truck	2
Co.	_	Hu
75C, 1-ton 2500	Jan33 Jan35	1
66BL, 1½-ton3100	Jan00	2
66BL, 1½-ton3100 70B, 2-ton3300	Jan39	3 5
70BL, 2-ton3400 77B, 3½-ton4300	Jan43	7
77BL, 3½-ton4400 68, 5-ton5000		Inc
68, 5-ton5000	Jan45	1
68L, 5-ton5100 69, 6-ton5300	Jan46	2
69L, 6-ton5400 G.M.C.—General Motors	-	Int
Co		F
15, 1500 lb1775	Feb21	F
21, 1-ton2125	Feb23	1
2-ton 2800	Feb29	1
3½-ton3900	Feb33	1
15, 1500 lb. 1775 21, 1-ton 2125 1½-ton 2500 2-ton 2800 3½-ton 3900 5-ton 4500	Feb37	(
		(
C. %-ton 750		Joi
B, %-ton 700 C, %-ton 750 Gersix—Gersix Mfg. Co.	Feb31	1
G, 2½-ton3150 H, 2½-ton3160 K, 2½-ton3150	reo 1	Ju
K. 2½-ton3150		Ke
Giant—Chicago Pneuma	atic Tool	
15. 1-ton 1850	Feb23	I
114-ton 9250	Feb29	1
2-ton	Feb23	3
w. b2900	¥3-1- 00	1
Globe—Globe Motor Tru	Feb29	1
A1, 1-ton1490	Feb23	161
B, 1%-ton1850	Feb25 Feb29	KI
A1, 1-ton1490 B, 1½-ton1850 C, 2-ton2190 CC, 2-ton2290	Feb23	
Gramm. Bernstein-Grau	mm-	1
Bernstein Motor Tr	uck Co.	1
2½-ton3300	Jan41	KI
3½-ton4000	Jan43	-
5-ton	Jan45	j
Bernstein Motor Tr 1½-ton 2450 2½-ton 3300 3½-ton 4000 5-ton 5000 Grant—Grant Motor Ca 12, ¾-ton 1125	Jan33	1
10 (124 in. w.		1
10 (124 in. w. b.)	Jan36	K
b.)1935		
15 (124 in. W.	Tom 90	-
b.)	Jan39	
16 (140 in. w. 2250 b.)		1.0
Hall—Lewis-Hall Iron	Works	Li
2-ton2675 3½-ton3500		
5-ton		
Harvey—Harvey Motor	Truck	L
Co		La
WFA, 2½-ton3050	Feb31	
WFA, 2½-ton3050 WHA, 3½-ton3950 WKA, 5-ton5050 Hatfield—Cortland Cart	Feb35 Feb37	
	R.	
Carriage Co.	. 02	

Maker & Model Price	Specifi-
Hawkeye—Hawkeye Ti	
K, 1½-ton\$1900 L, 2-ton2500	Feb27
L, 2-ton2500	
Henderson—Henderson	Bros.
Model C1350	
Model E 1950	
Hendrickson—Hendrick	son
Co., Inc. Model C1350 Model D1750 Model E1850 Hendrickson—Hendrick Motor Truck Co.	Elek an
H 314-ton 3650	Feb -35
Higrade Higrade Moto	ors Co.
A18. 1-ton to	_
2250 lb2100	Jan33
A18, 1-ton to 2250 lb 2100 Hoover—Hoover Wagor 1500 lb 1600 2250 lb 2250	Jan33
2250 lb2250	
Huriburt-Huriburt Mo	tor Truck
1½-ton 2600 2-ton 3500 3½-ton 4250 5-ton 5250 7-ton 6500 Independent—Independ	Jan35
2-ton3500	Jan39
5-ton5250	Jan45
7-ton6500	Jan47
Motor Co.	CILL
1-ton1685	Apr51
International—Internat	ional
Harvester Corp.	The board
F. 1-ton1850	Feb21
F, 1-ton long	
W. b1900 K. 114-ton 2200	
K, 1½-ton long	
W. b2250	
G, 2-ton long	
w. b2650	- 6-
JONES TODAY MOTOR ('9	
1-ton	Jan59
Independent—Independ Motor Co. 1-ton	Jan59 Truck Co.
Jumbo—Nelson Motor 2½-ton2250	Apr52
Jumbo—Nelson Motor 2½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 'ar Co.
Jumbo—Nelson Motor 2½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 'ar Co.
Jumbo—Nelson Motor 2½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 'ar Co.
Jumbo—Nelson Motor 21½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 car Co. Feb25 Feb29 Feb35
Jumbo—Nelson Motor 21½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 car Co. Feb25 Feb29 Feb35
Jumbo—Nelson Motor 21½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 car Co. Feb25 Feb29 Feb35
Jumbo—Nelson Motor 21½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 car Co. Feb25 Feb29 Feb35
Jumbo—Nelson Motor 21½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 car Co. Feb25 Feb29 Feb35
Jumbo—Nelson Motor 21½-ton	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan45 Jan46 car Co. Feb25 Feb29 Feb35
Jumbo—Nelson Motor 21½-ton 2250 Kelly-Springfield — Kell Springfield Motor K31, 11½-ton 2750 K32, 11½-ton 2750 K35, 21½-ton 3250 K36, 21½-ton 3250 K46, 31½-ton 4450 K50, 5-ton 4900 P60, 6-ton 5200 General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4785.00 Kleiber—Kleiber & Co AA, 1-ton 2400 A. 1½-ton 2650 BB, 2-ton 2950 BB, 2-ton 2950 C, 3½-ton 4100 D, 5-ton 5100 Koehler—H. J. Koehle	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc.
Jumbo—Nelson Motor 21½-ton 2250 Kelly-Springfield — Kell Springfield Motor K31, 11½-ton 2750 K32, 11½-ton 2750 K35, 21½-ton 3250 K36, 21½-ton 3250 K46, 31½-ton 4450 K50, 5-ton 4900 P60, 6-ton 5200 General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4785.00 Kleiber—Kleiber & Co AA, 1-ton 2400 A. 1½-ton 2650 BB, 2-ton 2950 BB, 2-ton 2950 C, 3½-ton 4100 D, 5-ton 5100 Koehler—H. J. Koehle	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc.
Jumbo—Nelson Motor 21½-ton 2250 Kelly-Springfield — Kell Springfield Motor K31, 11½-ton 2750 K32, 11½-ton 2750 K35, 21½-ton 3250 K36, 21½-ton 3250 K46, 31½-ton 4450 K50, 5-ton 4900 P60, 6-ton 5200 General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4785.00 Kleiber—Kleiber & Co AA, 1-ton 2400 A. 1½-ton 2650 BB, 2-ton 2950 BB, 2-ton 2950 C, 3½-ton 4100 D, 5-ton 5100 Koehler—H. J. Koehle	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc.
Jumbo—Nelson Motor 2½-ton 2250 Kelly-Springfield—Kell Springfield Motor K31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K45, 2½-ton 3250 K45, 4-ton 4250 K45, 4-ton 4400 K50, 5-ton 4900 P60, 6-ton 5200 Ceneral Utility 2073.50 Freighter 2832.50 Heavy Duty 3905.00 Dreadnaught 4785.00 Kelber—Kleiber & Co AA, 1-ton 2460 AA, 1½-ton 2650 BB, 2½-ton 3500 C, 3½-ton 4500 Corp. K, 1¼-ton 4500 Koehler—H. J. Koehle Corp. K, 1¼-ton 1450 Corp. K, 1¼-ton 1450 K, 1½-ton 1450 Corp. K, 1¼-ton 1450 M, 3½-ton 1450 M, 3½-ton 1255 M, 3½-ton 1255 M, 3½-ton 3250 M, 3½-ton 3250 M, 3½-ton 3250 M, 3½-ton 3250 M, 5-ton 4500	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan44 Jan46 Jar Co. Feb25 Feb29 Feb35 ,, Inc.
Jumbo—Nelson Motor 2½-ton 2250 Kelly-Springfield Motor K31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K36, 2½-ton 3250 K40, 3½-ton 4250 K45, 4-ton 4400 K50, 5-ton 4900 P60, 6-ton 5200 Ceneral Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4735.00 Kleiber-Kleiber & Co AA. 1-ton 2400 A. 1½-ton 2650 BB. 2-ton 2950 BB. 2-ton 2950 BB. 2-ton 2950 C, 3½-ton 4100 D, 5-ton 5100 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L, 2½-ton 1250 O, 5-ton 4500 Lang. Lang. Mator The	Truck Co. Apr52 y- Truck Co. Jan35 Jan41 Jan43 Jan44 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ,, Inc.
Jumbo—Nelson Motor 2½-ton 2250 Kelly-Springfield —Kell Springfield Motor K31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K36, 2½-ton 3250 K40, 3½-ton 4250 K45, 4-ton 4400 K50, 5-ton 4900 P60, 6-ton 5200 Ceneral Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4735.00 Kleiber—Kleiber & Co. AA. 1-ton 2400 A. 1½-ton 2650 BB. 2-ton 2950 BB. 2-ton 3500 C, 3½-ton 1500 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L, 2½-ton 3250 O, 5-ton 4500 Lane—Lane Motor Tr G. 1½-ton 2250 Jacchiel 2250 Lane—Lane Motor Tr G. 1½-ton 2250 Lane—Lane Motor Tr G. 2½-ton 2250 Lane—Lane Motor Tr Lane M	Truck Co. Apr52 y- Truck Co. Jan35 Jan41 Jan43 Jan44 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ,, Inc.
Jumbo—Nelson Motor 21½-ton 2250 Kelly-Springfield—Kell Springfield Motor Springfield Motor R31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K45, 2½-ton 3250 K45, 4-ton 4250 K45, 4-ton 4900 P60, 6-ton 5200 Kissel—Kissel Motor C General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4785.00 Kleiber—Kleiber & Co. AA. 1-ton 2400 A. 1½-ton 2650 BB. 2-ton 2950 BB. 2-ton 2950 BB. 2-ton 5100 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L. 2½-ton 1985 M. 3½-ton 2550 D. 5-ton 5100 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2250 H, 2-ton 2250	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 car Co. Feb25 Feb29 Feb35 ., Inc. Pr Motors Jan33 uck Co. June -28
Jumbo—Nelson Motor 2½-ton 2250 Kelly-Springfield Motor K31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K36, 2½-ton 3250 K40, 3½-ton 4250 K45, 4-ton 4400 K50, 5-ton 4900 P60, 6-ton 5200 General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4735.00 Kleber-Kleiber & Co AA. 1-ton 2400 A. 1½-ton 2650 BB. 2-ton 2950 BB. 2-ton 2950 BB. 2-ton 3500 C, 3½-ton 4100 D, 5-ton 5100 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L, 2½-ton 1255 O, 5-ton 4500 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2250 H, 2-ton 2975 K, 3½-ton 3970 K, 3½-ton 3970 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2975 K, 3½-ton 3900 Lange—Lange Motor B - 2-ton 3900 Lange—Lange Motor B - 2-ton 3900 Lange—Lange Motor B - 2-ton 3900	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc. Pr Motors Jan33 uck Co. June -28
Jumbo—Nelson Motor 2½-ton 2250 Kelly-Springfield Motor K31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K36, 2½-ton 3250 K40, 3½-ton 4250 K45, 4-ton 4400 K50, 5-ton 4900 P60, 6-ton 5200 General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4735.00 Kleber-Kleiber & Co AA. 1-ton 2400 A. 1½-ton 2650 BB. 2-ton 2950 BB. 2-ton 2950 BB. 2-ton 3500 C, 3½-ton 4100 D, 5-ton 5100 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L, 2½-ton 1255 O, 5-ton 4500 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2250 H, 2-ton 2975 K, 3½-ton 3970 K, 3½-ton 3970 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2975 K, 3½-ton 3900 Lange—Lange Motor B - 2-ton 3900 Lange—Lange Motor B - 2-ton 3900 Lange—Lange Motor B - 2-ton 3900	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc. Pr Motors Jan33 uck Co. June -28
Jumbo—Nelson Motor 2½-ton 2250 Kelly-Springfield Motor K31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K36, 2½-ton 3250 K40, 3½-ton 4250 K45, 4-ton 4400 K50, 5-ton 4900 P60, 6-ton 5200 General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4735.00 Kleber-Kleiber & Co AA. 1-ton 2400 A. 1½-ton 2650 BB. 2-ton 2950 BB. 2-ton 2950 BB. 2-ton 3500 C, 3½-ton 4100 D, 5-ton 5100 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L, 2½-ton 1255 O, 5-ton 4500 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2250 H, 2-ton 2975 K, 3½-ton 3970 K, 3½-ton 3970 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2975 K, 3½-ton 3900 Lange—Lange Motor B - 2-ton 3900 Lange—Lange Motor B - 2-ton 3900 Lange—Lange Motor B - 2-ton 3900	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc. Pr Motors Jan33 uck Co. June -28
Jumbo—Nelson Motor 2½-ton 2250 Kelly-Springfield Motor K31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K36, 2½-ton 3250 K40, 3½-ton 4250 K45, 4-ton 4400 K50, 5-ton 4900 P60, 6-ton 5200 General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4735.00 Kleber-Kleiber & Co AA. 1-ton 2400 A. 1½-ton 2650 BB. 2-ton 2950 BB. 2-ton 2950 BB. 2-ton 3500 C, 3½-ton 4100 D, 5-ton 5100 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L, 2½-ton 1255 O, 5-ton 4500 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2250 H, 2-ton 2975 K, 3½-ton 3970 K, 3½-ton 3970 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2975 K, 3½-ton 3900 Lange—Lange Motor B - 2-ton 3900 Lange—Lange Motor B - 2-ton 3900 Lange—Lange Motor B - 2-ton 3900	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc. Pr Motors Jan33 uck Co. June -28
Jumbo—Nelson Motor 2½-ton 2250 Kelly-Springfield—Kell Springfield Motor Stat. 1½-ton 2750 K35. 2½-ton 3250 K36. 2½-ton 3250 K45. 4-ton 4250 K50. 5-ton 4900 P60. 6-ton 5200 Dreadnaught 4785.00 Kleiber—Kleiber & Co AA. 1-ton 2450 AA. 1-ton 2450 AA. 1-ton 2450 A. 1½-ton 2550 BB. 2-ton 2550 BB. 2½-ton 3550 C. 3½-ton 1450 Corp. K. 1¼-ton 1450 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L. 2½-ton 3250 O. 5-ton 4500 Lance—Lane Motor Tr G. 1½-ton 2250 D. 5-ton 4500 Lance—Lane Motor Tr G. 1½-ton 2250 D. 2-ton 2975 K. 3½-ton 3900 Larrabee-Deyo—Larra Motor Truck Co., M. 1-ton 1950 N. 1½-ton 2450 O. P. 2½-ton 3000 A. 3¼-ton 2450 O. P. 2½-ton 3000 A. 3¼-ton 2450 O. P. 2½-ton 3000 A. 3¼-ton 3450 O. P. 2½-ton 3000 A. 3¼-ton 3450 O. P. 2½-ton 3000 A. 3¼-ton 3450 O. P. 2½-ton 3000 A. 3¼-ton 3350 O. P. 2½-ton 3000 A. 3¼-ton 3350 O. P. 2½-ton 3000 A. 3¼-ton 3350 O. P. 2½-ton 3000	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc. Pr Motors Jan33 uck Co. June -28
Jumbo—Nelson Motor 21½-ton 2250 Kelly-Springfield—Kell Springfield Motor Springfield Motor R31, 1½-ton 2750 K32, 1½-ton 2750 K35, 2½-ton 3250 K45, 2½-ton 3250 K45, 4-ton 4250 K45, 4-ton 4900 P60, 6-ton 5200 Kissel—Kissel Motor C General Utility 2073.50 Freighter 2832.50 Heavy Duty. 3905.00 Dreadnaught. 4785.00 Kleiber—Kleiber & Co. AA. 1-ton 2400 A. 1½-ton 2650 BB. 2-ton 2950 BB. 2-ton 2950 BB. 2-ton 5100 Koehler—H. J. Koehle Corp. K. 1¼-ton 1450 L. 2½-ton 1985 M. 3½-ton 2550 D. 5-ton 5100 Lane—Lane Motor Tr G. 1½-ton 2250 H, 2-ton 2250 H, 2-ton 2250 H, 2-ton 2250	Truck Co. Apr52 y- Truck Co. Jan35 Jan35 Jan41 Jan43 Jan44 Jan46 Car Co. Feb25 Feb29 Feb35 ., Inc. Pr Motors Jan33 uck Co. June -28

Maker & Model Price cations Lippard-Stewart—Lippard-	Maker & Model Price cations Oshkosh—Oshkosh Motor Truck
Stewart Motor Car Co. 1500 lb \$1900 Jan31 1-ton 2250 Jan33	Mfg. Co. 1%-ton\$3400 Overland—Willys-Overland, Inc.
1500 lb. \$1900 Jan31 1-ton 2250 Jan33 1½-ton 2850 Jan35 2-ton 3050 Jan39	800 lb, Panel1045 Jan28 800 lb, Express.1025 Jan30 1200 lb1150 Jan30
Loyal—Loyal Motor Truck Co. 1000 lb 865 Sp. 1500 lb 1025 1-ton 1300	Packard—Packard Motor Car
Luverne Tuverne Automobile	Co. 1E, 1-ton2650 Feb27 14/E, 2-ton3000 Feb31
Co. 2-ton1750 Maccar—Maccar Truck Co.	1E, 1-ton
L, 1½-ton2750 Jan35 L, 2½-ton3300 Jan41	4E
2-ton	Paige—Paige-Detroit Motor Car Co.
11/ ton 2000 for 25	50-18, 2-ton2950 Nov60 Palmer—Palmer-Meyer Motor Car Co.
2-ton 3000 Jan33 3½-ton 4600 Jan44 5½-ton 5250 Jan45 7½-ton 5500 Jan47 Manly—O'Connell-Manly Truck	1-ton1685 Feb24 2-ton2495 Feb31
7½-ton5500 Jan47 Manly—O'Connell-Manly Truck Co.	Panhard—Panhard Motors Co. 1-ton1195 Feb24
30, 1½-ton2050 40, 2-ton2350	1-ton 1195 Feb24 1½-ton 1395 Dec52 Parker Parker Motor Truck Co. 2-ton 3150 May -54
50, 2½-ton 2800 60, 3-ton 3150 Master—Master Trucks, Inc.	3-ton 3700 May -54 4-ton 4250 May -54 5-ton 5000 May -54 Patriot—Hebb Motors Co.
Junior, 1½-ton.1990 M, 2-ton2390 Feb35 O, 2-ton long	1%-ton1950 Nov59
w. b2490 Feb35 W. 2-ton worm drive2590 Feb35	2½-ton2750 Nov59 Peerless—Peerless Motor Car Co.
WIL Z-ION WORM	3-ton4125 4-ton4150 Jan45
drive, long w. b	Pierce-Arrow—Pierce-Arrow
inc.	Motor Car Co. 2-ton
1-ton1085 Feb23 Menominee — Menominee Motor Truck Co. 1-ton1890 Feb23	Rainier—Rainier Motor Corp. R-5, 1000 lb 1250 Jan29 R2. 1500 lb 1350 R4. 2500 lb 1350 R6, 3000 lb 1890
H 146-1002975 Feb27	R4. 2500 lb1595 Jan33 R6, 3000 lb1890 Rennoc—Rennoc-Leslie Motor
D, 2-ton 2950 Feb29 G, 3½-ton 3880 Feb35 J, 5-ton 4950 Feb37 Midland—Midland Motor Car &	Co. 2½-ton2895 May -52
Truck Co. MT, 2-ton3000 Dec57 MS, 2½-ton3150 Dec57	Reo—Reo Motor Car Co. F, 1500 lb1350 Feb21 Republic—Republic Motor Truck
Moreland Motor Truck Co.	Co., Inc.
1-ton2175 1½-ton2930 Feb27 2½-ton3775 Feb31	Dispatch, 1500 1b
1½-ton 2930 Feb27 2½-ton 3775 Feb31 4-ton 4850 Feb37 5-ton 5250 Feb37 Muskegon—Muskegon Engine	11X, 1½-ton1885 Feb27 12, 2-ton2275 Feb31 T 3½-ton 3450 Feb35
Co. 20, 2-ton2325 Feb29	V. 5-ton4750 Feb37 Reya—Reya Co.
Myers—E. A. Myers Co. 50, 1-ton1495 July -45 55, 1-ton1460 July -45	America.
50, 1-ton 1495 July -45 55, 1-ton 1460 July -45 70, 1½-ton 1750 July -45 75, 1½-ton 1700 July -45 Nash—Nash Motors Co.	3-ton4600 Jan41 4-ton4700 Jan44 Rowe—Rowe Motor Mfg. Co.
2018, 1-ton1650 Feb23 3018, 2-ton2175 Feb29 Quad, 2-ton3250 Feb29 Netco—New England Truck Co.	2-ton3000 Jan39 2½-ton3250 Jan41
Netco—New England Truck Co. D, 2-ton3000 Jan39	GW, 3-ton4500 Dec53 3½-ton3800 Jan43 5-ton4900 Jan43
D, 2-ton3000 Jan39 H, 2½-ton3200 New York—Tegetmeler & Riepe Co.	Rush—Rush Motors Corp. F, 1000 lb 895 Jan29 Sandow—Sandow Motor Truck
M, 1½-ton2600 N, 2-ton2800 Noble—Noble Motor Truck	Co.
Corp. NW, 2½-ton2675 Feb29 NW4, 4-ton3750	CG, 1¼-ton250 H, 1½-ton2550 Feb27 J2, ½-ton3250 Feb31
	CG. 114-ton 2250 H. 114-ton 2550 Feb27 J2, ½-ton 3250 Feb31 K. 312-ton 4250 Feb35 L. 5-ton 4950
Co. W2, 2-ton2950 Feb27 Norwalk—Norwalk Motor Car	Sanford—Sanford Motor Truck Co. W25, 2½-ton3000 W35, 3½-ton3975 Jan43
Co. 1-ton	W35, 3½-ton3975 Jan43 W50, 5-ton4750 Dec57
OK.—Oklahoma Auto Mfg. Co. 1½ T2. 1½-ton2250 2T2, 2-ton2450 3T2, 3-ton2985	Schacht—G. A. Schacht Motor Truck Co. 2-ton3150 Nov56
3T2, 3-ton2985 Old Hickory—Kentucky Wagon Mfg. Co.	2¼-ton3500 Nov56 3½-ton3950 Nov56
Mfg. Co. 1500 lb 995 Jan31 Old Reliable—Old Reliable Motor	Selden—Selden Motor Vehicle
Truck Co. 1½-ton Worm.2350 2½-ton Worm.3250	TXR, 1-ton1900 Jan33 TWL, 1-ton2100 JCB, 2-ton2759 Jan39 JWB, 2-ton2950
3½-ton Worm.4000	NL, 3½-ton3650 Jan43
ō-ton Worm5000 7-ton Chain6000 Oneida—Oneida Motor Truck Co	Service—Service Motor Truck
A. 1-ton2290 Feb23	220 1-ton 2100 Feb -24
B, 1½-ton 2650 Feb27 C, 2-ton 3000 Feb31 D, 3½-ton 3700 Feb35 E, 5-ton 4750	240, 2-ton3000 Feb31 270, 3½-ton3900 Feb35 275, 3½-ton sp. 4200 Feb35 300, 5-ton5000 Feb37

Maker & Model Price cations
Signal—Signal Motor Truck Co.
H, 1½-ton2700 Feb27
J, 2\(\frac{1}{2}\)-ton \(\ldots\). 3100 Feb31
Maker & Model Frice cations Signal—Signal Motor Truck Co. F, 1½-ton\$2400 Feb25 H, 1½-ton2700 Feb27 J, 2½-ton3100 Feb31 JL, 2½-ton long w.b3175 M, 4-ton4100 Feb37 ML, 4-ton long w.b4200 R, 5-ton5100 Feb37 Standard—Standard Motor
ML, 4-ton long
W. b4200 R 5-ton 5100 Feb -37
Standard-Standard Motor
Truck Co. 70, 2-ton2800 Feb31
70, 2-ton 2800 Feb31 65, 3½-ton 3875 Feb35 85, 5-ton 4650 Feb37 Sterling—Sterling Motor Truck
Sterling—Sterling Motor Truck
21/6-ton 3300
3½-ton4325
7-ton
6, 1500 lb 950 Jan31
8, 1-ton1575 Jan33
7. 2-ton2575 Jan39
3½-ton
SF, 1000 lb1045 Feb20
Sullivan—Sullivan Motor Truck
Corp. F. 1½-ton2350 Jan35
E, 2-ton3150 Jan39 Superior—Superior Motor Truck
1.00
A, 1-ton1600 Jan33 C, 2-ton2200 Jan39 Texan—Texas Motor Car Assn.
1½-ton
A. 1500 lb 1100 Jan -21
GW, 11/2-ton 2075 Jan35
PW, 3½-ton3600 Jan41
RW, 5-ton4650 Jan46
Titan-Titan Motor Truck Co.
5-6-ton5150 Feb37
31/4-ton 4300 Dec56 5-6-ton 5150 Feb37 Tower—Tower Motor Truck Co. F. 2-ton 2975 July -44 Trabold—Trabold Truck Mfg.
Trabold-Trabold Truck Mfg.
CO.
TJ, 1-ton 1200 Jan33 Traffic—Traffic Motor Truck Corp.
4000 lb1395 July -42 Triangle—Triangle Motor Truck
Co.
Co. 1½-ton 2185 Apr50 2-ton 2850 Twin City Four Wheel Drive Twin City 4 Wheel Drive Co Inc.
Twin City Four Wheel Drive-
Co., Inc.
B, 3½-ton4750 A, 5-ton5250
Union-Union Motor Truck Co.
Union—Union Motor Truck Co. BM, 2½-ton2375 Feb31 4-ton3500
Union—Union Motor Truck Co. BM, 2½-ton2375 Feb31 4-ton3500 United—United Motors Co.
Twin City 4 Wheel Drive Co. Inc. B. 3½-ton4750 A. 5-ton5250 Union-Union Motor Truck Co. BM. 2½-ton3570 United—United Motors Co. 1½-ton2625 2½-ton3335
Union—Union Motor Truck Co. BM, 2½-ton 2375 Feb31 4-ton 3500 United—United Motors Co. 1½-ton 2625 2½-ton 3335 3½-ton 3950 5-ton 4750
3½-ton3950 5-ton4750 U. S.—United States Motor
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3800 Feb35 Velle—Velle Motor Corp. 24. 1000 ib 2000
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3800 Feb35 Velle—Velle Motor Corp. 24. 1000 ib 2000
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3800 Feb35 Velle—Velle Motor Corp. 24. 1000 ib 2000
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3800 Feb35 Velle—Velle Motor Corp. 24. 1000 ib 2000
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3800 Feb35 Velle—Velle Motor Corp. 24. 1000 ib 2000
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3800 Feb35 Velle—Velle Motor Corp. 24. 1000 ib 2000
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3400 Feb35 Velie—Velie Motor Corp. 24. 1060 ib 2000 25B, 2-ton 2500 Feb37 26B, 3½-ton 3900 Feb33 Viall—Viall Motor Car Co. 2-ton 2500 Vim—Vim Motor Truck Co. 1000 ib 945 Jan29 22, 2-ton 3150 Jan35 23, 3-ton 3950 Jan41 25, 1-ton 2195 26, 3½-ton 2950 25, 1-ton 2195 26, 3½-ton 2195 26, 3½-ton 2190 Walter—Walter Motor Truck Co.
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3400 Feb35 Velie—Velie Motor Corp. 24. 1060 ib 2000 25B, 2-ton 2500 Feb37 26B, 3½-ton 3900 Feb33 Viall—Viall Motor Car Co. 2-ton 2500 Vim—Vim Motor Truck Co. 1000 ib 945 Jan29 22, 2-ton 3150 Jan35 23, 3-ton 3950 Jan41 25, 1-ton 2195 26, 3½-ton 2950 25, 1-ton 2195 26, 3½-ton 2195 26, 3½-ton 2190 Walter—Walter Motor Truck Co.
3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan46 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3400 Feb35 Velie—Velie Motor Corp. 24. 1060 ib 2000 25B, 2-ton 2500 Feb37 26B, 3½-ton 3900 Feb33 Viall—Viall Motor Car Co. 2-ton 2500 Vim—Vim Motor Truck Co. 1000 ib 945 Jan29 22, 2-ton 3150 Jan35 23, 3-ton 3950 Jan41 25, 1-ton 2195 26, 3½-ton 2950 25, 1-ton 2195 26, 3½-ton 2195 26, 3½-ton 2190 Walter—Walter Motor Truck Co.
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3½-ton 3950 5-ton 4750 U. S.—United States Motor Truck Co. E. 2½-ton 2800 Jan41 H. 2½-ton 3250 Jan41 D. 3½-ton 3500 Jan44 J. 3½-ton 3500 Jan44 K. 5-ton 4850 Jan44 K. 5-ton 4850 Jan44 Universal—Universal Service Co. 1½-ton 2000 Feb24 3-ton 3400 Feb31 3½-ton 3800 Feb35 Velle—Velle Motor Corp. 24 1000 ib 2000 25B. 2-ton 2950 Feb27 26B. 3½-ton 3900 Feb33 Viall—Viall Motor Car Co. 2-ton 2500 Vim—Vim Motor Truck Co. 1000 ib 945 Jan29 22, 2-ton 3150 Jan35 23, 3-ton 3950 Jan41 25, 1-ton 2195 26, 3½-ton 1200 Walter—Walter Motor Truck Co. 5-ton four wheel drive 5500 Ward La France—Ward La France Truck Co, Inc. 2A, 2-ton 3500 June -25 Wayne—Automobile Mfg. & Eng. Co.
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Co. 7-ton5700 Feb. -38

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Maker & Model Price cations
 Jan. -36
White Hickory—White Hickory
Mfg. Co.
F, 1-ton .....2000
H, 1½-ton ....2400 Jan. -35
  Wichita-Wichita Falls Motor
       Feb. -24
                                                                                                  Feb. -31
Feb. -35
Feb. -37
S, 6-ton ....5400

Wilcox—H. E. Wilcox Motor Co.
A, 1-ton ...2100 Feb. -24
X, 1½-ton ...275 Feb. -27
Q, 2½-ton ...3250 Feb. -31
P, 3½-ton ...350 Feb. -35
W, 5-ton ...5000 Feb. -37

Wilson J. C. Wilson Co.
1-ton ....1750
2-ton ....2800 Feb. -31
3½-ton ....3800 Feb. -35
5-ton ....4600 Feb. -37

Winther—Winther Motor Truck Co.
        Vinter—Winther Mo
Co.

38, 1½-ton ...2250
48, 2-ton ...3000
68, 3-ton ...3800
88, 4-ton ...4200
108, 5-ton ...5000
128, 6-ton ...5250
148, 7-ton ...5500
                                                                                               Feb. -31
Feb. -32
Feb. -37
Feb. -38
Apr. -51
 Wisconsin—Myers Machine Co.
B, 1½-ton ...1750
C, 2½-ton ...2500
E, 5-ton ...3000
E, 5-ton .....5000

Witt-Will-Witt-Will Co., Inc.
WD, 2-ton ...2850 Jan. -39

Wolverine-American Commercial Car Co.
C, 1½-ton ....2180 July -27
         Gas-Electric Truck-Tractors
Couple Gear—Couple Gear
Freight Wheel Co.
5-7-ton ...6100-6200
7-10-ton ...6600-6800
10-15 ton .7200-7400
                 Gasoline Truck-Tractors
  Columbia—Columbia Motor
   Truck & Trailer Co.
6-ton sh. w. b. 2450
Federal—Federal Motor Truck
Co.
         3-ton .......2500
7-ton ......3475
    Garford-Garford Motor Truck
   Co. 2018, 41/2-ton .3400 Jan. -47 Jan. 
                                                                                                     Jan. -47
          Corp.
KT. 3-ton .....1750 Jan. -47
LT, 5-ton ....2165
    Kuhn-Kuhn Tractor Truck Co. 5-ton ......5000
    Master-Master Trucks, Inc.
6-ton ......2650 Feb. -38
     Rennoc-Rennoc-Leslie Motor
          8-ton ......2893
    Ross—Ross Motors, Ltd.
3-ton Utility ..1850
    Watson-Watson Wagon Co. 5-ton ........4050
                     Electric Truck-Tractors
   Couple Gear—Couple Gear
Freight Wheel Co.
5-7-ton ...4800-4750
7-10-ton ..5200-5350
10-15-ton .5800-6000
                             Electric Commercial
     Atlantic—Atlantic Electric
Vehicle Co.
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(Continued on page 32

Maker & Model Price cation	1 22
C. T.—Commercial Truck Co. of America.	
½-ton\$1750 Jan4	19
1-ton2100 Jan4	1.9
2-ton	10
3½-ton3650 Jan5	
5-ton4150 Jan5	50
Couple Gear—Couple Gear Freight Wheel Co.	
3½-ton Chassis.4750	
5-ton Chassis5200	
7-ton Chassis5900	

Maker & Model	Price	Spec		
Lansden—Lansde	en Co.,	Inc.		
2000 lb. Chassis	.2090	Jan.	-49	
4000 lb. Chassis 7000 lb. Chassis 10,000 lb. Chas- sis	.3025		•	
Walker-Walker				
M, 1000 lb K, 1-ton				

Maker & Model Price	catio		
L, 2-ton\$2600	Feb.	-39	
P, 3½-ton3600	Feb.	-39	
N, 5-ton3900	Feb.	-39	
5, 10-ton trac- tor5000 7, 15-ton trac-	Feb.	-39	
tor5500	Feb.	-39	
Ward—Ward Motor Ve WS, 750 lb 1100 WA, 1000 lb 1600 WB, 1-ton 2100	Jan. Jan.	-49 -49	

Maker & Model	Price	Spec	ons
WD, 2-ton WF, 3½-ton WH, 5-ton	3200	Jan. Jan. Jan.	-50

Gas-Electric Commercial

Couple Gear-Couple Gear
Freight Wheel Co.
3½-ton6100
5-ton6700
7-ton . 7200

\$75,000,000 Available for Federal Improvement Might Well be Used to Build Roads

Co-operative highway construction under the Federal aid road act must be resumed as quickly as possible in full measure, the Secretary of Agriculture, D. F. Houston, stated at a conference of editors of agricultural journals held recently in Washington.

From unexpended balance of Federal appropriations for the last few years, from State funds beyond what was necessary to meet the Federal allotments, and from amounts available during the current fiscal year, approximately \$75,-000,000 will be available during the calendar year. Next year, if all the balance should be expended during this year, and we should have to rely solely on the funds accruing next year, there will be about \$20,000,000 from Federal appropriations, and probably more than this amount from State sources, according to the Secretary's statement. The States, in addition, will expend sums in excess of what they have assigned, or will assign, for Federal aid road projects.

"It seems to me," said the Secretary, "that we should take a further steptake this step not only because of the importance of good roads, but also because of the desirability of furnishing worthy projects on which unemployed labor during the period of readjustment may be engaged. There will be many things suggested for which Federal and State funds will be sought. Some of these will be unworthy. Clearly such public works as roads are worthy, and it would be in the public interest to make available larger appropriations from the Federal Treasury to be used separately or in conjunction with State and local

"There need be no delay in the execution of such a program. The Nation has already provided the machinery in the Department of Agriculture and in the State highway commissions. The Federal aid road act was fruitful of good legislation, and each State in the Union now has a central highway authority with power and funds to meet the terms of the Federal act. The two agencies, in conjunction, have been engaged in devising well-considered road systems and in making surveys, plans and specifications. The task will be one of selection, and those roads should be designated for improvement which are of the greatest economic importance, with due regard to such military and other needs as are proper for consideration. There is no necessity for any departure from this scheme. The suggestions made have been canvassed with the President, the Secretary of War and the Postmaster-General, and they are in accord with the view that additional funds should be made available to this department, and that they should be expended through existing machinery."

M. L. Pulcher, Vice President of the Federal Motor Truck Company

Mr. Pulcher has been connected with the motor truck business since 1910. when he helped to organize the Federal Motor Truck Co. with a capital stock of \$100,000, at that time taking the range as general manager. In 1912 the capital was increased to \$200,000, in 1914 to \$500,000 and in 1916 to \$2,000,000. There has been \$1,000,000 stock issued and there is \$1,000,000 in the treasury. Mr. Pulcher was elected vice-president in 1914, and still holds that position.

This company began by building a 11/2ton model, and continued the manufacture of it until 1913, at which time they added the 31/2-ton model. In 1914 they added the 2-ton, and in 1916 a 1-ton and a 5-ton, making a complete line from 1 to 5-ton, inclusive. The company's original factory space was about 3,000 sq. ft., while today the total floor space is something over 250,000 sq. ft., all occupied and all producing trucks.

The business has developed from a matter of a few hundred thousand dollars a year up into the millions. This company was one of the early companies which started the truck business at the time when trucks were very difficult to sell and were practically an unknown quantity, and it believes that it has had as much to do with the developing of the truck industry as any one in the business. This company also does a large exporting business, over 35 per cent. of its output being exported. Its trucks are in use in practically every country in the

N. A. C. C. Appoints Committee

on Shows At a meeting of the directors of the

National Automobile Chamber of Commerce, held Dec. 4, a committee was appointed, composed of C. C. Hanch, J. Walter Drake and S. A. Miles, to confer with the representatives of the New York and Chicago automobile trade associations in connection with the local automobile shows which the dealers propose to hold in those cities early in 1919. Henry Paulman and G. M. Allison attended for the Chicago Automobile Trade Association, and Charles H. Larsen, R. J. Gilmore and Charles A. Stewart for the New York Dealers' Associa-



Stake Driver Attached to Motor Truck Conserves Labor and Time

This outfit is used by Barnum & Bailey. The stake driver drives from ten to fifty stakes per hour, according to the hardness of the ground. Power is supplied by a small horizontal gas engine. The Mack truck is used for very heavy tractor work such as pulling two or three baggage wagons, and is even equipped with large rings in front for pulling loads on the reverse.

Prominent in the Commercial Car Industry



M. L. Pulcher

Vice President of the Federal Motor Truck Company,
Detroit, Michigan

"I have been a close reader of the COMMERCIAL CAR JOURNAL for years and am glad to state that I believe it is a power for good in the transportation world second to none in the country."

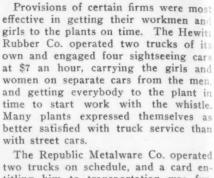
Maluchia

Motor Truck Passenger Service During Street Car Strike

Buffalo had a street car strike recently which lasted three weeks. There had been plenty of warnings that the strike was to be called, and a fleet of jitneys and auto trucks was prepared on the first morning of the strike to get the people to work on time. Firms had made arrangements also to use the cars of mem-

bers of the firm and the company's big trucks to bring in their people and to take them home at night.

The service was ample from the first morning, but gradually the jitneys withdrew from the lines where the pavements were poor, leaving the service entirely to the trucks. Truck fares were a nickel and jitney fares ten cents, but as the evening advanced the fees went up.



The Republic Metalware Co. operated two trucks on schedule, and a card entitling- him to transportation was furnished to each employee with a copy of the timetable. The Curtiss Aeroplane & Motor Corp. operated several trucks up and down Elmwood avenue, the thoroughfare leading from the heart of the city to the main Curtiss plant, four miles distant.

Peterson to Design New Koehler Models.—H. J. Koehler Motors Corp., Newark, N. J., which is planning to add a 3½- and a 5-ton truck, a 7-ton and a 10-ton road tractor to its present line, has appointed Carl D. Peterson to design and produce the new models. Mr. Peterson was one of the eight engineers credited by the S. A. E. for the design of the Class B military truck chassis.



Employees of the Curtiss Aeroplane and Motor Corporation, Ready to Start for Home

Activities of the Motor Truck Association of Philadelphia

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COMMERCIAL CAR JOURNAL OFFICIAL ORGAN

Great Prosperity Predicted for Truck Industry

EATURED by a spirit of optimism and prosperity for the trade in general, the November meeting of the Motor Truck Assn. of Phila., held Wednesday, Nov. 20th, at the Hotel Adelphia, was one of the most successful in years. J. D. Howley presided. More than 169 members and invited guests attended.

George M. Graham, Chairman of the National Motor Truck Committee, spoke on "Delivering Our Load After the War." Being located most of the time in Washington, Mr. Graham was in a position to tell the Motor Truck members just what to look forward to now that peace is on its way. "The truck is one of the best advertised of all things that has come out of the war," said Mr. Graham. "Its future possibilities are better than ever, and after things readjust themselves in a few months the dealers can be assured of tremendous

"I have learned that the Government business.

trucks that are in Europe will not be brought back, and Uncle Sam's trucks in use in this country will not be put on the market. There is enough use for them all. Over there the part of the American truck will be reconstruction work. France is anxious to take them instead of credits in its rebuilding plans."

Mr. Graham also outlined the importance of good roads in relation to the sale of trucks, and said that the better the highways, the more argument the truck salesmen will have in disposing of their goods. "There will be newer and stronger arguments," he said, "for trucks, as a result of their utility brought out in the war."

David S. Ludlum, member of the Pennsylvania Branch of the Highways Transport Committee and also President of The Autocar Co., gave an interesting talk that was full of optimism. He referred to the distribution of labor as a result of peace conditions, and made it plain that his company would make room for every man who had entered the service.

C. A. Musselman, Chairman of the Highways Transport Committee, spoke of the policies of that organization in regard to improving the road conditions. He also outlined the return loads and rural motor express ideas. Mr. Musselman also predicted that there will be a field for 3,000,000 more motor trucks in the rural districts throughout the country.

Harold P. Gould, representing the Truck Owners' Conference, gave a talk illustrated with motion pictures on truckloading efficiency.

Among the other speakers were City Statistician E. J. Cattell, Capt. J. J. Johnson, United States Army, and Arthur Bittong. Chairman F. G. Browning, of the Membership Committee, turned in the names of about twenty new members. A proposal by one of the members to have a motor truck show in January was referred to the Board of Governors.

Trucks Hauling Chrome Ore From California Mines

A Government Contract to Haul Seven Thousand Tons of Chrome Ore Over a Perilous Sixty-five Mile Route

By JAMES G. STAFFORD

AULING seven thousand tons of chrome ore a distance of sixty-five miles from the Seiad Valley Mines in Siskiyou County, Cal., to the railroad at Hornbrook, near the California-Oregon, before the winter snows block the road, is the tremendous task set by the Government authorities for a fleet of twenty-four 2½-ton Fageol motor trucks. Chrome ore is an essential of immediate need in the production of high grade steel for arms, ammunition, aviation engines, and other high quality machinery.

The fleet of Fageol trucks, under the direction of contractors Benjamin H. Maddox & Company, of San Francisco, and H. W. Rohl, of Sacramento, has been operating on this haul from the Seiad

way to produce only 48,000 tons annually. There are, however, chrome ore deposits in the United States capable of filling the entire need of the mineral. Probably two-thirds of the chrome ore required this year will be mined in the United States.

California to Supply Need

As in so many instances, California again steps to the fore as a leader in the solution of this problem. Three-fourths of the entire production of chrome ore needed for Government purposes will come from California and southern Oregon, and of this Pacific Coast production about ninety per cent. will come from Siskiyou County, California, in which the Seiad Valley properties are located. All

of that tremendous tonnage will be transported over a sixty-five mile road of the very roughest sort by this twenty-four truck fleet of Fageol 2½-tonners.

There are three important mines in the Seiad Valley district. Two of these are being operated by J. F. Reddy, of Medford, Oregon. These mines are generally known as the "Black Beauty Mines" in the Seiad Valley and the "Lucky Boy" mines out at Hamburg. The other mine of important capacity in the Seiad district is operated by Samuel H. Dolbear.

Ore Found in Siskiyou County

Chrome ore is ordinarily found in small pockets. A deposit that would produce more than two or three thousand tons of high grade ore is 'quite unusual, although there are in this Siskiyou County mineral belt deposits that already have produced more than this amount, and are still apparently far from being exhausted.

Chrome ore deposits are invariably located high up in the mountains. The ore is mined by hand. Mining operations are comparatively simple—more in the nature of quarrying than the customary gold mining operations. The ore is piled on the dumps at the mine and is either trammed or sledded down the steepest places to bunkers or loading platforms, from which trucks receive it. The higher the grade of the ore, the greater is its weight.

Transportation Vital Need

The most vital need in the production of chrome ore at present is transportation, because practically every important chrome ore deposit in the United States is far removed from railroad lines. As

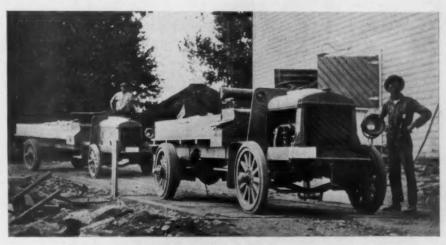


Back to the Mine With Supplies. The First Eight Miles Out of Hornbrook is Good Going on the Pacific Highway to Portland

Valley chrome mines, near the California-Oregon line in Siskiyou County, to Hornbrook, on the main line of the Southern Pacific Railroad. Since the middle of August these trucks have performed a large part of the task set them by the Government, but there remains a tremendous amount of the ore yet to haul.

Before the war chrome ore was brought into the United States as ballast at a comparatively low freight rate. It reached the eastern smelting centers at a low cost, without a long rail haul, Because of the tremendous demand for "bottoms," this practice has been discontinued. The result is a favorable development of our own chrome ore deposits in process.

The United States used 150,000 tons of chrome ore last year. Domestic mining operations had acquired sufficient head-



Pathfinders of the Twenty-four Truck Fleet of Fageol Two and a Half Tonners Arriving at Hornbrook on First Trip of Chrome-Ore Haul

indicated, the mining operations are relatively simple, and the Seiad district properties have deposits of great magnitude, but the ore is of comparatively no value unless it can be transported to a railroad, and shipped East to the smelters.

Motor Trucks Solve Problem

Several attempts have been made by other contractors operating motor trucks to solve the transportation problem. It meant hauling a minimum tonnage of ore per day at a cost that would not be prohibitive to miners, and would show fair profit to the contractors. trouble has been the total absence of a business organization for handling the trucks between the mines and railroads. Benjamin H. Maddox, who owned fifteen heavy duty motor trucks before he took this chrome ore hauling contract, is one of the best known trucking contractors in California. His success is largely due to the carefully planned system of handling his work, and the absolute working of that system under the personal supervision of trusted truck operators, dispatchers and mechanics.

Haul a Tremendous Task

The transportation of several thousand tons of chrome ore, covering a period of approximately one hundred working days, over a mountain road of sixty-five miles means that these trucks will register 455,000 ton miles before they will have completed their task. It means also that it will be necessary to haul seventy-five tons per day in order to get the required amount out before snows block the road.

So far as known, there is no other trucking operation in the United States of this character or of this magnitude. It is believed that the twenty-four Fageol trucks operating on this haul comprise the largest fleet of the same make and of the 2½-ton capacity hauling ore any place in this country.

Road Conditions Severe

The road conditions are serious and hazardous because the road follows up the canyon of the Klamath River. It is an old post road that reached from Hornbrook to the Coast, and was originally an Indian trail. According to reports it is not so much more than that now. It is narrow practically its entire distance, except the upper eight miles leading into Hornbrook station. It takes five to seven hours for a passenger car to cover the distance of sixty-five miles.

The river road has been used by wagons and automobiles for many years, and there are well defined ruts quite close together as a result. The rear wheels of the trucks being broader than the ruts, are forced to ride on the sides of the tires. Very serious tire wear and greatly increased expenses of operation are a consequence. The ordinary solid tire makes about fifteen round trips before it falls off.

Contractors Operate on System

The business-like system with which contractors Maddox and Rohl are mak-

ing a success of the Hornbrook-Seiad Valley chrome haul is illustrated by the careful way in which they have planned the undertaking. A camp was established at Oak Bar, a little settlement about midway between the mining district and Hornbrook. Trucks are operated in trains of five to ten, and the dispatch is so timed that one section leaves Oak Bar camp for the mine as the other leaves for Hornbrook. No truck driver is permitted to operate a truck for more than eight hours. This is because of the extreme danger of the narrow river canyon road. Only a narrow margin exists between the almost perpendicular bank of the river, and a quick drop into the water below. A drowsy driver is likely to get a long rest or a permanent sleep by going over the bank, consequently the business organization maintained by Maddox and Rohl centers on the control and attention that the drivers must give for the entire distance, and if such is given, there is no excuse for a truck leaving the road.

Careful Truck Inspection

Before being permitted to leave on a trip, each truck is given a careful inspection. The drivers are allowed one hour a day for the purpose of keeping up the general condition of their truck. As nearly as possible the drivers are made up in relay teams, operating one particular truck. A bonus system in addition to their regular wage has been arranged and it is possible for these drivers to make as much as one dollar per day extra for bringing their trucks into camp on schedule and in the best mechanical condition.

Trucks Carry Excess Loads

The ore hauling bodies on the trucks are 4 ft. wide, 12 ft. long and 14 in. deep. The full load of chrome weighs from 2½ to 4 tons and, because of the character of the road, the trucks must necessarily operate at a low rate of speed. It has been deemed advisable by the contractors to operate their trucks on this haul with a load of more than the factory rated capacity, and they carry three tons of chrome ore in addition to the bodies on the 2½-ton trucks.

None of the grades on the road are prohibitive, although there are many sharp pitches for distances of two or three hundred yards. Loaded trucks have the right of way and quite frequently a truck driver must back for the distance of a half-mile or more to let a load of chrome go by, because of the narrowness of the road.

Government Building New Road

At present the Government authorities have forty men working on this road in an endeavor to make it suitable for winter hauling, and it is understood that an appropriation of \$15,000 to improve the road has been made. This is a tremendous undertaking, as the road is cut into the banks of the Klamath River, which in a great many instances is practically perpendicular both above and below the road.

Creamery Company Transports Milk at Two and a Half Cents per Ton-Mile

The Detroit Creamery Co., of Detroit, operating a delivery unit composed of a Fruehauf semi-trailer of 12 tons capacity and a 7½-ton Mack tractor, is hauling on an average 48 tons per day at a cost of 2½ cents per ton-mile.

This six-wheeled unit operates daily, hauling approximately 250 cans of milk per trip over a distance of 50 miles at a cost of 30c per mile or about 2½c per ton-mile.

William Williams, superintendent of the Detroit Creamery Co., gives the following figures on cost of operation and work of the unit:

Number of trips per day4
Number of miles per day50
Tons handled one way48
Tons handled on return17
Average time per round trip, hrs.21/2
Debit cost of operation, per mile. 30c
Miles per trip loaded6
Cost per trip
Average load per trip, tons12
Cost per ton per trip15c
Cost per ton per mile21/2c

Mr. Williams says, "We believe that the trailer transportation method is the most economical for either long or short hauls."

The 1919 Lyons Sample Fair

American Consul Clarence Carrigan, in a report calling attention to the fact that many catalogues intended for exhibition at the 1918 Sample Fair in Lyons, France, did not arrive in time, suggests that it is not too early for American manufacturers and exporters to begin preparations for the 1919 Lyons Fair.

The 1918 fair was highly successful, the consul submitting nearly 1200 "trade opportunities" growing out of the American catalogue exhibit held under the auspices of the American Consulate in Lyons. Even greater results are looked for from the 1919 fair, which will be held in March, and for this reason the consults anxious that no American firm desirous of participating should fail because of delay in forwarding catalogues. The consulate plans to hire space at the fair and to exhibit American trade catalogues free of charge as in previous years.

Consul Carrigan suggests that the display of actual samples, rather than catalogues only, would be preferable wherever this is possible.

Wichita Falls Motor Co., Wichita Falls, Tex., which has for some time been making motor trucks, announces that it is ready to begin production on a farm tractor. It will be a four-wheel machine, with four-cylinder, vertical, 4¾ by 6 in. valve-in-head engine with magneto ignition. The weight is 4500 lb. and the drawbar pull 3000 lb. The machine will sell for \$2000.

Building a Complete Powder City With Motor Trucks and Tractors

How a Fleet of Fifty Truck Units Made Possible the Construction, in Less Than Ten Months' Time, of Nitro, West Virginia, the Government's New \$45,000,000 Reservation

HE town of Nitro, West Virginia, on January 1st, 1918, did not exist. Its site was cultivated farm lands. Ten months later Nitro was a busy town of 17,000 workers engaged in building and operating a Government, smokeless powder plant of immense capacity.

Transportation figured large in the Aladdin-like creation of this community; all of the material used in the construction of Nitro, with its thousands of homes, its scores of plants, its electric, gas, sewer and water systems, and its miles of railroad sidings and vehicle highways, had to be hauled.

The transportation units utilized in this work comprised: 50 motor trucks, about 650 teams of horses, 17 yoke of oxen, 30 small caterpillar tractors, 6 standard-gauge locomotives, a number of narrow-gauge locomotives, a river steamer, 11 barges and a derrick boat.

To the motor truck was given the haulage work that required speed and large volume. Yardage and tonnage totals of compelling magnitude give some conception of the task performed by these trucks, but a true realization of it can be obtained only through a personal inspection of conditions.

Nitro is located in a valley, 16 miles west of Charleston, W. Va. It comprises a reservation somewhat more than three and one-half miles long and nearly one and one-half miles wide. The Kanawha River bounds it on one side. Rolling hills rise from the other.

Consider, then, the transformation that took place almost overnight. Where acre after acre of crops grew last year, now stand scores of plants, huge boiler houses, administration buildings, stores, offices, barracks, thousands of homes, a hospital, powder magazines, a railroad

station. Small wonder that this was a job in which motor trucks played an important part!

Scan this list of items, some wholly and others partly hauled by motor trucks; 30,950,000 bricks, 185,000 cubic yards of concrete, 75,079,000 feet of lumber, 199,-160 lineal feet of 4 to 12-in. sewer pipe, 46,356 lineal feet of segment block, 343,-200 feet of cast iron water pipe, 65,500 feet of wooden water lines, 14,340 plumbing fixtures, 80,000 valves, materials for more than 12 miles of macadamized

general contracting agents, the Thompson-Starrett Co., representing the United States Government.

The units used were thirty-five 2-ton, 2yard hydraulic dump trucks; ten 2-tonners with platform bodies and five 5-ton trucks with three-yard bodies. All were Pierce-Arrow trucks.

The transportation company rented the trucks to the general contractor, at a stated price per day, furnishing only the necessary shop facilities for repairs, an adequate supply of repair parts, a com-

Trucks Streamed Continually Under These Loading Bins From Morning to Night.



roads, several thousand tons of machinery, household furniture for the 2,000 four, five and six-room bungalows; materials and equipment for 10 mess halls, 7 stores, 22 stands and a large administration building.

Speed was the prime factor in the distribution of these materials. This meant dependable haulage, highly systematized.

The motor trucks' haulage was handled by the Heavy Haulage Co., of New York City, of which George H. Pride is the president. The contract was let by the petent master mechanic and assistants, an office man and an operating superintendent. The chauffeurs, gasoline, oils, shop and office buildings were furnished by the general contractor.

The drivers were required to clean and grease their trucks at the close of every day. Over-loading was strictly prohibited. This meant not only a more sensible use of the trucks, but resulted in increased haulage, for rated loads reduced much of the miring of trucks in the muddy clay in which they often were compelled to



A Section of the Heavy Haulage Company's Fleet at Nitro, West Virginia Drivers were required to clean and grease their trucks at the close of every day



The Fleet of Five Five-Tonners Hauled Three Hundred Tons of Crushed Stone in Nine Hours.

Some of the achievements of the trucks

The hauling of 500,000 brick by eight trucks in six days, half-mile trips and loading periods of twelve minutes.

The removal of five carloads of warehouse materials by eight trucks in three and one-half hours, the round trips being four miles.

The haulage of 300 tons of crushed stone by the fleet of five five-tonners in nine hours; three-mile trips, quick loading and unloading.

Such instances as these enable one to understand how the general contractors were able to utilize the motor trucks and other haulage forces so effectively that almost amazing achievements resulted.

The fact that 3000 individual buildings were erected up to October 12 meant that a building was built and furnished, electrically wired and plumbing installed, every 30 minutes during the working day.

Scarcely a phase of the constructed operations escaped the activities of the motor truck fleet. They played a part in transporting the mill-patterned sections of the bungalows. They played a part in the haulage of materials for the big water system-a system that has a capacity of 90,000,000 gallons of water daily, a quantity twice that consumed by the city of Baltimore. This immense quantity is needed to supply not only the homes but mainly the big battery of boilers, capable of delivering 47,000 hp. They played a part, too, in the construction of the electrical system with its 3000 kilowatt generators. They played a part in the construction of the many miles of sidewalks. They played a part but a recital of practically all of the building activities would be necessary to complete the list.

Superior Engine Service-Bulletin No. 300, of the Buda Company, Harvey, Ill., dealing on the operation of the Buda engines. It contains an attention chart, deals quite thoroughly on lubrication, also upon the wiring and spark plug attention, magneto difficulties, carburetor troubles and the cooling system. Various parts of the engine are illustrated, several being cut-away views showing the internal working parts.

Aluminum Boxes for Odorous Truck Loads

When the contract for hauling "fleshings" was offered the Highways Motor Transport Company at Cleveland several months ago, Manager C. S. Richardson hit upon a novel and entirely successful scheme for handling this odorous material. For the benefit of those who have never been in the vicinity of fleshings, it may be said that they are the scrapings of flesh, etc., removed from the inner side of animal hides before the latter are tanned. And they are just about as sweet smelling as a cargo of pole cats, only more so. To handle these, on a fifty mile haul to a big woodworking plant that uses them for making glue, Manager Richardson had constructed six wooden boxes, approximately eight feet long, three feet wide and thirty inches high, with lids. These were lined throughout, including the under side of the lid, with aluminum plate, which does not absorb odors. Each had a capacity of one ton of fleshings.

The result is that the cargo may be carried with a minimum escape of noxious odor, and when emptied, the boxes are thoroughly cleansed with live steam leaving the interior as clean as it was originally. On the return trip express matter is packed inside the boxes, so that no empty boxes are carted back as would otherwise be the case.

Similar boxes could be used in solving problems of this sort for other motor truck lines.

The S. A. E. Standards of **Automobile Construction**

A complete compendium of the standards adopted for automobile construction by the Society of Automotive Engineers will be found in each issue of the CHILTON AUTOMOBILE DIRECTORY in that part of the book devoted to general information. This and considerable other valuable data of use to a manufacturer or repairman is printed in each issue so that it can always be kept at hand, and as each manufacturer and repair shop receives a copy of this book, it should be in a convenient place for reference. In addition to the data as above noted, it, of course, contains complete alphabetical lists of manufacturers of every part and accessory made for automo-

Parker Rust-Proof Co., of America, Detroit, Mich., announces that Clark W. and Wyman C. Parker have disposed of all of their stock in the Parker Rust-Proof Co., and Clark W. Parker has resigned his position as a director of that corporation and is no longer connected with the firm in any capacity. Their stock interest has been acquired by A. V. Foster, of the firm of Spitzer, Rorick & Co., Toledo, Ohio.



Firestone Window Display Which Increased Tire Sales

The illustration shows a window display and sign at the Firestone Branch on Baum Boulevard, Pittsburgh, which has attracted much attention. Along with the famous Giant Tire the display includes more recent additions, the solid cushion tire and the giant pneumatic, which can be seen daily on the city streets. Mr. McClintock states that last month the Pittsburgh Branch showed a substantial increase, in spite of the unusual conditions. The branch sales for the month ran well over \$200,000.

When the Tortoise Was Wiser Than the Hare

By A. V. COMINGS

HEN Billy Quinn decided that handling the steering gear of a couple of muzzle loading, back action Missouri mules hitched to a sway-backed rattle trap dray could no longer win for him the necessary three squares and a pipe full per day, he sought out his old friend Brady, who had recently taken on the agency for the Red Eagle line of trucks and who, to tell the truth, was considerably responsible for Billy's decision.

Now, Billy Quinn didn't know any more about motor trucks than a Hun knows of decency. He knew they had four wheels and that somewhere, concealed about their anatomy, they had something that made 'em go without the aid of horses. And he knew that they were usually fed gasoline instead of oats. About there 'twere best to draw a veil of charity over Billy's knowledge of trucks.

But he knew Brady, ah, didn't he know that lad, though! Whenever they met, it was . . . "Ah, d'ye mind the time, Dinny, that the old b'ye chased us" . . . and then they were off for an hour or more a-talking over the old days down in the Fifteent' Ward, when they were boys together and tougher lads it would be hard to find—or lads more loyal to one another, come good, come bad.

And so Billy knew that whatever truck Brady told him was a good truck was a good enough truck for Billy Quinn, and that settled it. So a Red Eagle it was, and the day that Billy Quinn turned her over for the first time, alone, and mounted to his place behind the big steering wheel, well, there was only one other time in his life when he felt prouder and happier, and that was the day that good old Father Mooney had said the words that made blushing Kitty Malone Mrs. Billy Quinn.

Short was the time it took Billy Quinn to learn about all there was to know about that big Red Eagle, and the work he put by every day with that old buss astonished even Brady, used as he was to truck performances. And Billy was satisfied, and his bank account grew faster than it had ever grown before.

Then came the day when a big manufacturer who occasionally called on Billy to help out with his hauling needs, asked him to take a trip over to Boston with a load, accompanying two of the big Achilles trucks which usually handled all the firm's business. The Achilles was one of the top notchers in the trucking world, cost about twice as much as Billy's Red Eagle, and the drivers felt themselves just about twice as high in the social scale accordingly.

Billy was supposed to keep right along behind the two Achilles trucks, but alas,

they hadn't gone far till the Red Eagle began to drop slowly behind, and slowly but surely, the two leading trucks drew away till Billy was left alone, plugging along without a miss, but plugging slower than the other fellows, with only the memory of their parting jeers for company.

He couldn't believe it, but it gradually came to him that Brady, his old pal, Brady, had put something over on him. His Red Eagle, after all, was a poor second to the big Achilles, and Brady had told him she would do every bit of the work those boasted Achilles trucks would do, and then some. But here he was, left behind.

"Ah, the mangy spalpeen, the loyin dog, just wait till Oye sit oyes on his ugly face agin, jist wait! It's his own mither won't know his face whin Oye git tru' wid 'im!"

And more like it, all the way into Boston town.

And when he got there, the first thing he saw was the two Achilles trucks, their loads delivered, and their drivers waiting for him. But somehow those two smart gentlemen, who had been so full of humor at Billy's expense such a short time ago, did not seem particularly jolly just now.

They came over to Billy's truck, even helped him unload, and finally one of them, trying to make a smile sit well on his doleful face, asked Billy if he thought his Red Eagle could tow the two Achilles trucks back home.

"An' phwat wud Oye be after towin' your bee-yutiful drays home fur?" questioned Billy, "G'wan wit' your kiddin'. I can't hear ye'."

But they insisted. They meant it. For those superior lads, those wise muts, had thought to put one over on Billy and his Red Eagle when they left home, and had cut out the governors on their big Achilles before leaving. That explained the speed they made, and it explained, too, the burnt out bearings in the engines of both trucks.

When he heard the story, Billy took his turn at smiling, and he didn't spare the feelings of those two Achilles drivers, either.

Tow them home? "Oh-ho," says Billy. "An' d'ye tink Oy'd be seen draggin' a couple o' dead cats like dem trucks o' yours into de old town?"

That ended it. And Billy put the old Red Eagle over the road toward home in a far happier frame of mind than he had taken her the other way.

Bright and early the next day he sought out his old pal, Brady, and told him the story, with many a laugh.

"Shure I could make your old Red Eagle go as fast as the Achilles," says

Brady, "if you want your governor cut out. But lad, don't do it. Y'ud probably have some burnt out bearin's of your own to mend up. An' it doesn't pay, lad, it doesn't pay."

And four days later, when Billy Quinn saw the two Achilles trucks come limping home from Boston, their bearings finally fixed up again, he decided that, take it by and large, it didn't.

Inasmuch as this little tale is founded on an actual experience of two eastern truck owners, the moral should be taken to heart by those who have to do with selling and operating trucks.

Don't try to make a poor race horse of a first class Percheron.

Interurban Combined Freight and Passenger Service

An interesting experiment is being conducted by C. E. Woolner, of Peoria. He is combining freight and passenger service in a way that makes for efficiency and economy.

The initial line that he has established operates between Peoria, Mossville, Rome and Chillicothe, a distance of 20 miles north. Eventually it is planned to extend this line to Macon, a distance of 50 miles from Peoria, touching all the cities and villages along the Illinois River. There are also being considered now four other lines, radiating west, south, southwest and east from Peoria. This will be opened for traffic next spring providing buses and trucks can be secured.

In the summer a vehicle is used that can carry either freight or passengers. It has removable seats on the sides so that the truck can be used for hauling freight at night and for passenger traffic in the day time, keeping the truck in almost constant operation. Extra trailers are also to be used for freight, these to be coupled onto the buses. While one is being unloaded and reloaded at a terminal, the other is making a trip so that there is no delay to passengers.

The charge for passengers is two cents per mile and for packages, 15 to 50 cents, varying according to size.

By the ton special rates are made, depending on the character of the commodity handled. Where the shipper loads and unloads the truck himself, an extra concession is made and where delivery is made at some point other than the regular depot, there is a slight additional charge.

Champion Ignition Co., Flint, Mich., is erecting a three-story addition to its plant, which will cost approximately \$50,000.

Garageman Finds Wood Hauling a Profitable Side Line

By C. P. SHATTUCK

HEN the R. D. Britton Co., of Hartford, Conn., garageman and dealer found it difficult to obtain deliveries of passenger cars and to maintain its repair shop owing to the scarcity of trained mechanics, a plan was evolved to fill the gaps in the column marked

"profits."

The company has a long term lease of its building, at no small cost, and to fill the void created by war conditions hit upon the possibilities of supplying fuel, which appears to be in great demand in Hartford, judging from the volume of business transacted by the R. D. Britton Co. To make a long story short the head of the company bought 250 cords of wood from a farmer 18 miles distant from the city and is selling it.

The wood is hauled to the garage by 2- and 3-ton Velie trucks owned and operated by the company and these machines as well as a 1500-lb. capacity Denmo are employed in making delivery. About one-half of the ground floor of the garage is used to store the wood, which comes in the standard four-foot lengths. There are cords and cords of the wood piled almost to the ceiling but they dwindle very quickly despite the fact that the Velie trucks make daily trips to the source of supply and that outside Velie trucks have been hired to haul.

Saws With Gas Engine

The four-foot sticks are cut to the ordered lengths by a circular saw, operated by a gas engine, a 5 hp. Fairbanks, bolted to two heavy joists. Drive is by belt and the saw frame is mounted on the other end of the joists. The empty truck is backed up within convenient distance of the saw and as the wood is cut it is thrown into the body. The bodies are the conventional stake type but have been augmented by bolting strips of wood to the stakes so that the sides and ends are about four feet high. The tail gate is removable.

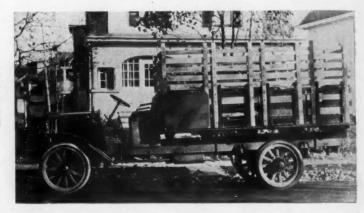
The drivers of the trucks load the wood at the wood lot, it being piled near the road. The drivers also help load the cut wood at the garage and unload when delivered. The wood is not carried into the house or place of destination, it being thrown on the sidewalk. The saw is run by the foreman of the garage and a boy passes the four-foot lengths to the saw carriage.

It Pays to Advertise

An advertisement in the paper to the effect that seasoned hard wood, cut to any desired length not above four feet, would be delivered by motor truck, brought quick responses, and in less than

a still greater load. Deliveries are not confined to the city limits but are made from five to eight miles distant. The majority of the deliveries, however, are within the city limits. The price of the wood to the consumer varies from \$16 to \$18 the cord. The cost of the wood and that of sawing it is not given but it may be assumed that it is in the neighborhood of \$6 the cord on the ground. Even with the cost of carting, sawing and delivering, there should be a net profit of fairly respectable proportions. The only draw-back to the plan is that the R. D. Britton Co. cannot secure labor enough to increase the supply for

Illustrating How the Regular Body is Augmented by Latticework Bolted to Stakes.



three weeks the company was and still is swamped with orders, for there are many householders in Hartford to remember last winter and the shortage of coal. The capacity of the saw is said to be a cord of foot lengths in 1½ hours. That it is kept busy is very evident, as the 2-ton Velie has delivered as many as seven cords the day in addition to hauling from the wood lot.

The 2-ton Velie frequently hauls three cords from the woods and makes the 18 mile run in an hour. The 3-ton hauls

delivery, although it is understood that the wood will be forthcoming.

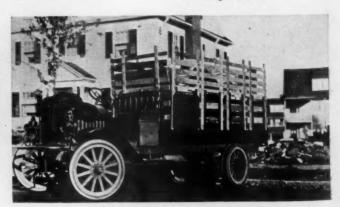
Suggestion for Manufacturers

The National Automobile Chamber of Commerce, in a recent bulletin, suggests that all motor truck manufacturers in their advertising advance the cause of economy in truck transportation by including a line in their advertising, as follows:

Return Loads Will Cut Your Haulage Costs



One of the Velie Trucks Arriving From Wood Lot, Eighteen Miles Distant, With the Four-Foot Lengths



The Wood is Not Carried Into the House, but is Deposited on the Sidewalk



TRVCK ACCESSORIES APPLIANCES



The Cleveland National Spring-Head Tool Holder

A tool which can be used in garages and repair shops equipped with lathes is the Cleveland National Spring Head Tool Holder manufactured by the Cleveland National Machine Co., of 1566 W. 70th St., Cleveland, Ohio. The device,



The Spring Head is Designed to Give a Perfectly Smooth Cut

which is illustrated herewith, is adjustable for various purposes and can be had on trial if desired. It is being manufactured in one size only at the present time, although it is expected that larger sizes will be made. It is to turn out excellent work and its utility becomes greater with use.

This device is designed as a finishing tool, the spring head being to relieve the chatter and give a perfectly smooth cut. It has 3 tool clamps, all interchangeable and invertible. The spring is so designed that if set on center, it cannot gouge or dig in and has sufficient strength to stand up to all finishing work that would ordinarily be done on a lathe taking a shank 1/2 x 1 1-16 in. The maker states that the clamps positively cannot work loose on the swivel if they are properly tightened. The tension of the spring is such that it will operate satisfactorily on various pitches of threading on all grades of tool steel ordinarily used. The features of this tool make it adaptable to the following work: broaching, cut-off, forms, disks, grooves, gauges, key-ways, slots, radius, taps, turning and worm or square threading. The entire holder is made of forged steel, tempered and polished, and is of high grade workmanship.

Savidge Junior Valve Lathe

The A. C. Savidge line of valve lathes as described in the June number, page 61, has since been improved and is now being manufactured and distributed by A. C. Savidge, 611 N. Capitol Ave., Indianapolis, Ind. The lathes have been entirely redesigned to obtain a greater range of performance and greater ac-

curacy and their appearance has been changed as well.

The Savidge Universal Bench Valve Lathe is self-centering and hand oper-The carriage can be set to cut for 45 degree valve heads or 30 degrees. The adjustment of the cutting can be closely set and locked, and high speed steel cutters, ground ready for use, are supplied with the lathe. It will accommodate valves up to 5 in. diam. with 7-16 The maker states that the in. stems. work can be quickly done, since the valve can be operated with the right hand and the feed screw adjusted with the left hand. It is stated that valve grinding has been greatly reduced and much time and labor saved.

The price of this lathe is \$10 and the cost of extra cutters are \$1 each.



Savidge Junior Valve Lathe

The Savidge Junior Valve Lathe accommodates Ford valves and all other valves with a 5-16-in. stem and cast iron valve heads up to 13/4 in. diam. cut at 45 degree angle. It is light, compact and does its work quickly and easily. It can be clamped in a vise or even held in one hand and operated with the other. It is a time and labor saver in trimming the valve or in testing new valves about to be put into use. This tool can be used by anyone. It is equipped with a high speed steel cutter ready to use. The price complete is \$5.

Lubriko Grease

"Lubriko" is a transmission and differential lubricant, but can be used in all parts of trucks and tractors in all seasons of the year. Lubriko is an animal, mineral and vegetable compound with pure ingredients, free from fatty acids. Its ingredients are treated in such a way,

it is said, that the product is unaffected by heat or cold, from 25 deg. below zero to 300 above, and maintain the same consistency between these temperature points.

It is claimed that after Lubriko has been reduced to the consistency of a heavy oil, by the churning action of the gears, it will follow the gears, completely covering them, and will not throw off the gears when running at 50 m.p.h.; yet it requires no more power to drive the gears through Lubriko than it does through castor oil. It is put up in 5, 10, 25 and 50 lb. cans; also barrels and half barrels, and is manufactured by the Commercial Lubricating Co., Meadow & Jackson Sts., Philadelphia, Pa.

The Anco Evenheat Manifold

The Anderson Co., of South Bend, Ind., has introduced a combined intake and exhaust manifold for the Ford engine, this being cast in one rigid piece. A hot dividing wall completely separates the exhaust and intake channels, and is centrally located directly above the vertical section of the intake. The gas mixture from the carburetor strikes this "hot spot" and is transformed into a fog of gas and drawn into the cylinders. Each half of the hot spot, and therefore each division of the intake, gets exactly the same amount of heat, and thus the mixture drawn into each of the cylinders is uniform. The maker of this manifold states the mixture produced with the use of this manifold is quick-firing and clean



Anco Evenheat Manifold Attached

burning, and the advantages derived from its use are greater mileage, reduced carbon accumulation, easier starting, smoother power and in general better and longer engine life. The retail price of this manifold is \$9.75 and it can be secured on trial.

The Prismolite Sun-Ray Lens Display

The Prismolite Company of Columbus, O., manufacturer of the Sun-Ray Lens, is helping the dealer advertise this equipment by the display shown here-



A Prismolite Aid for the Dealer

with. It is a counter or window display card lithographed in blue, gray, yellow and white, and is $11\frac{1}{2} \times 27$ in. The card holds a pair of the lenses in such a way that a light can be placed behind them if desired. These cards will be forwarded to any dealer on request, and are also packed with each ten pairs of lenses.

The "Little Husky" Lighting Outfit

The Consolidated Utilities Corp., of 730 S. Michigan Ave., Chicago., Ill., is manufacturing the Little Husky Electric Light Plant for homes and buildings where current is not available. The price of this plant is \$395 f.o.b. Sandusky, O., and its capacity is fifteen 20-watt lights or their equivalent in power. The maker states it will give the light and power necessary in the average home, will pump 120 gallons of water an hour, or run the washing machine, churn, etc.

This plant operates automatically. As soon as approximately 20 per cent, of the battery capacity is used up, the en-



"Little Husky" Lighting Outfit

gine starts itself automatically, charges the battery properly, and stops, all of itself.

The full equipment is a feature of the Little Husky. The Stewart-Warner vacuum fuel system, a large battery and all necessary parts make it a complete plant. The battery is a sixty-six ampere hour.

The Dri-Kure-Retreder

The Western Vulcanizing Mfg. Co., of 150 N. Desplaines St., Chicago, Ill., has brought out the Dri-Kure-Retreder for repairing old castings which are often set aside as no good. Notable features of this vulcanizer are said to be the secureness with which the tread is put on and the unusual pressure used. It is also stated that the following faults have been eliminated in the repairing of the casing: shrunken or stretched beads, blownout beads and separation and general deterioration of the casing body due to live steam. It is because the beads are not cured again and no steam can get into the fabric body. This device makes retreading of old casings profitable to both the repairman and the owner.



Dri-Kure-Retreder Outfit

The great pressure on the tires cured in these molds is claimed to produce unusual wearing qualities. The pressure is obtained by the use of a sand bag shaped like an inner tube, which is placed inside the casing. Upon the top of this bag is a spring steel bar curved to conform to the curve of the mold, and the clamp is screwed down upon this, giving a solid irresistible pressure which tends to amalgamate the plies of the fabric in the carcass and the tread with the carcass, and adds to the density and toughness of the tread itself. At each end of the mold is a non-heat-conducting block, it being a continuation of the cavity at each end. This block makes it possible to apply pressure all the way to the end, without leaving an unsightly lap mark.

The use of an aluminum shell fitting the cavity of the mold will give a rib impression. Two sizes of the molds with these liners will take care of all sizes of cord tires from $3\frac{1}{2}$ to 5 in. Each vulcanizer has its own gas and gasoline

burner and water compartment, which is so arranged that no water touches the tire cavity, it being entirely surrounded by steam on the sides as well as on the bottom.

Because of the construction in the Dri-Kure-Retreder, in which the cavity is surrounded with steam, full treads or tread bands can be secured perfectly. The molds are arranged to cure sections also, and by the use of these molds and an air bag it is stated they will turn out perfect sectional repairs. Three of these molds will give the repairman a complete plant ready for all sizes of tires of different treads, and, with the addition of the aluminum matrix or shells, the same molds will cure treads built up in the ordinary manner with rib impression such as are used in cord tires. The further addition of a set of bead molds to this outfit makes it complete for all kinds of casing work.

Rapidayton Gasoline Curb Pump

The Dayton Pump & Mfg. Co., of Dayton, Ohio, manufacturer of self-measuring gasoline pumps and oil storage systems, has recently placed on the market a 2½-gal. curb pump outfit. It delivers 5 gal. in 12 turns, 10 forward and 2 quick back strokes, thus effecting



The Rapidayton Two and a Half Gallon Curb Pump

a saving in time which is desirable at large garages or small garages where there are rush periods.

The 2½-gallon Rapidayton pump has a 6-in, dial visible from both sides of the

pump which allows the motorist to count by half gallons the amount he is getting.

An interesting feature of the Rapidayton pump is the cork insulated cylinder. The brass measuring cylinder is completely encased in a heavy covering of cork to protect the measuring cylinder from expansion and from contraction due to changes in temperature, thus insuring accurate measure under varying conditions. Another feature of the Rapidayton is the quick access to the piston and valve, it being unnecessary to dismantle the entire pump to remove the piston, lever and valve. It is accomplished in the Rapidayton by taking off the small side plates at the base.

The gears of this pump are machine cut.

In designing this pump attention has been given to the style of its construction, so as to avoid making it large and cumbersome but with pleasing lines.

Dole Compression Coupling

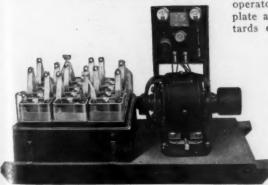
The fields of usefulness in which Dole Double Compression Couplings can profitably be employed are almost unlimited. They are claimed to be indispensable wherever air, water, chemicals, oils or grease have to be transferred from one point or position to another, and find wonderfully important uses in the couplings connected with the automobile engine. A



Double Compression Insures the Joints Against Leakage

study of the illustration will readily show the unique feature of double compression provided in this coupling, insuring the joints against leakage, regardless of the severest vibration. Note the seating in the "V" notch and its double grip of the tubing.

The Dole double compression couplings are made in two parts, viz.: body and screw, and are so simple and practical in construction that a perfect connection is assured it in every instance. They are manufactured by the Dole Valve Co., 208 N. Fifth Ave., Chicago, Ill.



Universal Lighting Plant

McCord Gasket Boards

With curtailed car production creating a brisk demand for gaskets, the new Mc-Cord Quality Gasket Display Boards are quite a timely selling aid. These boards are an attractive reminder of the customer's gasket needs and they warn the dealer when stock is getting low.

The illustration shows the board for Fords, which bears 25 complete sets of copper-asbestos gaskets. The surface of the board is buff-coated and the trimming is in mission. Each size is plainly

lettered with accurate outline drawings.

There is also a larger board with many popular sizes of round and flange gaskets. Both are described in the new catalogue of Stevens & Company, who distribute McCord gaskets to jobbers. A copy will be sent to dealers only, by addressing the distributor at 375 Broadway, New York.





Universal Lighting Plant

A lighting plant designed to operate under all conditions is being manufactured by the Universal Battery Co., 3410-24 S. La Salle St., Chicago. The plants consist of storage cells, generator switch board and engine, and by the operation for a few hours each week of the plant enough current is stored to meet all needs.

This concern uses the Universal sealed glass cell storage battery, which was invented by it and is used in all of its standard lighting plants. The advantage of the glass jar is that it enables the operator to see the condition of the plate at a glance. The sealed top retards evaporation and avoids the dan-

ger of foreign substances with consequent injury to the plate. Each battery is composed of individual 2-volt cells, each cell being a unit in itself. In case of damage to a cell, it can be removed from the battery with but a moment's interruption.

The generator is of the 4-pole shunt wound type, which is especially suitable for house lighting purposes. The generator of the smallest Universal outfit operates at 1800 r.p.m. and the

largest of the standard plants at 1200 r.p.m.

The switchboard panels are of ebony asbestos board, which is fireproof. It is light in weight and is a good insulating material. Slate or marble can be furnished if desired. All the boards are furnished with the necessary meters, instruments, etc. There are 2 types of circuit breakers used. The first is the manually controlled breaker, which is designed to prevent current from flowing from the battery through the generator in case the voltage falls. breaker is opened by gravity and there are no springs or hinges. The function of the reverse breaker is two-fold. First, to automatically close the charging circuit, throwing the battery into the line, when the generator pressure has reached a specific voltage, and second, to automatically break the charging circuit, throwing the battery out of line when the generator pressure has dropped to normal battery voltage, thus allowing a flow of current into the batteries from the generator, at such times as the generator voltage exceeds the battery voltage, and prevents at all times the flow of current from the battery through the generator.

The Universal Battery Co. does not make plants with automatic self-starters and stoppers unless so specified. These lighting plants may be operated with any make of engine, as they can be had without the engine as part of the unit if desired.

Universal Equalizing Vice-Jaw

The illustration shows the Universal Equalizing Vice Jaw in an ordinary vice, gripping a pair of pliers. The Universal jaws are designed to grip even a reverse curve, exerting an equal pressure on the



Universal Equalizing Vice-Jaws Gripping a Pair of Pliers

narrow points as well as on the wide points. The gripping lugs are made of cold-drawn, hardened steel and are so shaped that pressure on any part of the face of the jaw will cause an adjustment of the gripping lugs, to conform to the shape of the object. It is made in 4- and 5-in. sizes to fit corresponding size vice jaws. The prices are \$8 for the 4-in., and \$9 for 5-in. size. It is made by the Universal Equalizer Co., 808 Broadway, Cincinnati, Ohio.

A New Auto Creeper

The difficulties experienced in working under a car or truck are many and perplexing, but they may be overcome in a great degree by the use of a well-made and well-planned floor creeper. The Universal Fixture Co., of 814 Reese St., Chicago, Ill., is the manufacturer of a creeper of considerable merit. It is made of se-



This Creeper is Shaped to Fit the Back

lected birch, the most elastic and pliable wood obtainable, which assures great strength. It has strong steel casters of the swivel type. Comfort is another item taken into consideration, these creepers being shaped to fit the back, as well as having a comfortable cushion for the head, taking all strain from the neck. This creeper comes in two sizes, style No. 1—size 17 x 36 in., and style No. 2—size 23 x 36 in.

The Mankey System for Tire Display

A tire display system, some of whose merits are cleanliness, convenience, appearance and economy of time, is being manufactured by the Carlsten-Williams Co., 2246-8 Michigan Ave., Chicago, Ill. It is a tire rack to which additions can be made at any time to accommodate increased stock. This device also enables you to know immediately the stock of your tires in a certain size. It can be used in the window for display purposes, the tires being suspended above the display of equipment and parts ordinarily placed in the window.

The operation of the hanger is very simple. The weight of the tire pulls the hanger down ½ in., causing the hook to pass over the rivet, thus locking it in the upright position. This operation puts tension on the spring within. When it is necessary to remove a tire, slightly raising it will release the spring, allowing the tire to be lowered.

The hangers are made in two sizes; the large size is for use with 1-in. pipe, to be spaced 5 to 6 in. apart and it will accommodate up to 5-in. tires. The small size is for use with ¾-in. pipe and should be spaced with 4 to 5 in. between the rows, and accommodates tires up to 3½ in. The large and small sizes in black enamel finish are \$7.50 per dozen. Large and small size nickel plated are \$9.60. The floor rack with one dozen hangers, height 4 ft., length 6 ft., is \$12.50; with 2 dozen hangers, 12 ft. long, price \$23; and for each additional dozen \$10.50 is added, and for each foot over 4 ft. in height \$.15 is added for each standard. These are with the hangers in black enamel, the nickel being \$2.40 extra per dozen.

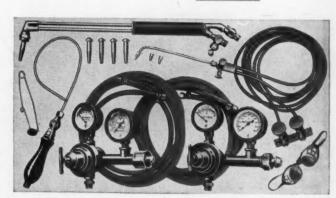
Various combinations of this tire rack can be introduced with rows one above another in the floor rack style, or suspended from the ceiling in single or double rows.

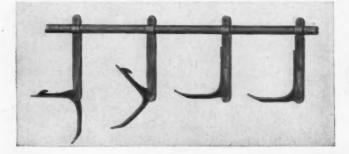
Rego Welding and Battery Service Outfit

Bastian-Blessing Co., West Austin Ave. at La Salle St., Chicago., Ill., is manufacturing various types and styles of welding outfits. Outfit No. 7, priced at \$65, is designed for the welding of metals and battery service to use with oxygen and acetylene. The complete outfit consists of the following articles and material: Model S welding torch, 17 in. overall, which is equipped with 5 nickel-copper tips and has a fibre handle, a 2-in, oxygen regulator with 3000 lb. and 60 lb. gauges, a 2-in. acetylene regulator with National 500 lb. and 60 lb. gauges, and lighting tank connection, two 12-ft. lengths best quality hose, pair of dark glasses, a Pyro lighter, Model D decarbonizing torch, model B torch with 3 tips, two 6-ft. lengths of rubber tubing and 1 bench block, together with clamps, hose connections, etc., complete.

The Rego Auto Welding and Battery Service Outfit

This outfit is for use with oxygen and acetylene. It consists of the Rego Model S welding torch, which is 17 in. long, a 2-in. oxygen regulator, and a 2-in. acetylene regulator, hose, glasses, etc. The price is \$65.





This Tire Display Rack Can be Used in the Window as Well as in the Shop The feature of the Model S welding torch used in this outfit is its lightness, the weight of the torch being but 17 oz. The mixing chamber of the torch is located in the head. This torch is for a tank or medium pressure generator.

A New Mud Shoe for Tires

Nelson-Bacon Mfg. Co., 31 Lake Drive, Oshkosh, Wis., is offering a new antiskid contrivance, the Terwedo mud shoe. It is made of 12-gage pressed steel, and has two heavy web straps which buckle around the felloe, holding the shoe se-



The Flanges Take Hold in the Mud, Preventing Skidding

cured to the tire. Two flanges, seven in, long, take hold in the mud, while the shoe, which has a concave surface and projects beyond the tire, has a tendency to raise the car gradually.

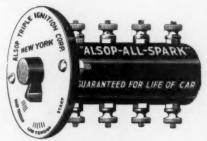
These shoes are as useful in snow or sand as in mud, and add a weight of only five lb. to the car. They are sold in sets of two shoes, with four straps, and retail at \$3.80 a set.

Coon-McGraw Sales Co., Pittsburgh, Pa., has been appointed a "stributor of Holley manifolds, made the Holley Carburetor Co., Detroit. The territory covered will include Pennsylvania, Ohio, New Jersey and the District of Columbia

Maxfer Truck & Tractor Co., Chicago, Ill., has filed a voluntary petition in bankruptcy.

Alsop-All-Spark

Alsop Triple Ignition Corp., 1765 Broadway, cor. 57th St., New York City, is making a device designed to prevent the missing of explosions due to the spark plug being in poor condition, or badly carbonized. The retail price is \$6. The



The Alsop-All-Spark

maker states it will increase the speed and power of the engine, and fire dead, carbon-choked spark plugs. It is claimed that this device raises the voltage 10 per cent. and any misfire is practically impossible. It is screwed into the dashboard and is controlled by a dial on the inside of the car, and connected between the spark plugs and the distributor and does not interfere in any way with equipment already attached.

Alamo Lighting Unit

An outfit capable of supplying electricity for lighting, and operating various devices and appliances at the farm homes where electricity is not procurable, is being manufactured by the Alamo Farm Light Co., 1201 Farnam St., Omaha, Neb. The operation of the unit is controlled by a governor, starting and stopping being accomplished by simply pressing a button.

This unit is made in 3 sizes, the 75, 100 and 120 light, these ratings based on the capacity of the generator and battery in 16 candlepower or 20 watt lamps.

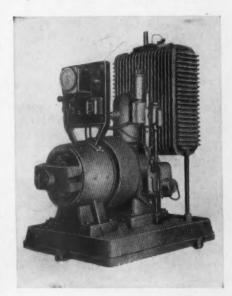
The Specifications

The engine of this outfit is a fourcycle, single-cylinder, vertical water cooled type, and is direct-connected to the one K.W. 40-volt generator and the complete unit, including the radiator, is assembled on a sub-base ready to connect to the storage battery. Current can be drawn from the generator when running, or the battery or both simultaneously, no adjustment being necessary to accomplish this. The piston reciprocates in a revolving sleeve which opens the inlet and exhaust ports in proper turn. The main frame is cast iron and carries the lubricating oil. An indicator shows the amount of oil present.

The engine is of the side crank pattern. The crankshaft is a 1-piece forging with counter-weight forged integral. The large bearing carries the load of armature, and the other end is supported by self-aligning ball bearings. The piston is of high-grade cast iron. The connecting rod is drilled throughout its length,

affording a channel for oil to the wrist pin. All bearings are lubricated by means of a rotary pressure pump, which forces oil to all moving parts. Cooling water circulates by the thermo-syphon system and ignition is from a high tension magneto. Gasoline is supplied to the carburetor by a rotary pressure pump, the surplus being returned to the base through an overflow. The thermostatic needle of the carburetor provides a richer mixture for prompt starting when the engine is cool, and reduces the richness of the mixture when the engine is hot.

The governor is of the throttle type and operated by an electric solenoid by means of which a taper charge is given to the battery. Safety devices prevent the operation of the plant when water or lubricating oil run low. The switchboard, containing the fuses, starting button, ampere-hour meter and reverse-current



Alamo Farm-Lighting Outfit

switch is mounted on the generator frame. The batteries are of the sealed glass cell type and are put in two trays of eight cells each all connected and charged.

Carborundum Valve - Grinding Compound and Aloxite Cloth

The Carborundum Co., of Niagara Falls, N. Y., manufactures two products of interest to the garageman, dealer, etc.: Carborundum valve grinding compound and Aloxite cloth. The former is something entirely new to the trade. It is a valve grinding compound and is a mixture of the hard, sharp, fast cutting carborundum grains and high-grade grease. It is made in the coarse, medium and fine mixtures, and it is said to quickly cut carbon, giving the valve a true clean seat. The coarse or the medium compound is for roughing in the valve, and the fine for polishing the valve. It is put up in what is termed the handy combination can, which carries both the fine and coarse compounds in separate compartments.

Aloxite cloth, which is rapidly succeeding the old-time emery cloth for general machine shop work, is put up in economy rolls as well as in reams and sheets. The cloth is cut in ½, ¾, 1, 1½, 2 and ½-in. widths, snugly wound on spools. The operator cuts off desired widths or lengths. Rolls are fifty yards long and made in any desired grits. Aloxite cloth is also furnished in 9-11-in. sheets.

Silco Lubricant

A new lubricant, especially recommended for truck transmissions and differentials and for gears and machinery of every description is being made by the United Lubricants Co., 51 E. 42nd St., New York City.

The claims made by the manufacturer of Silco Lubricant for that product are many and convincing. Among them are these predominating features and advantages: It is made from a very highly refined and filtered petroleum base; contains no animal fats, acids, alkali, water nor ingredients injurious to metals; thoroughly lubricates all bearings and parts; is adhesive and cohesive; does not leak, waste or throw out, used in proper consistency, resists heat, steam, water and rust; lubricates perfectly under cold and extreme conditions; combines efficiency—satisfaction—economy.

Silco Lubricant is furnished in standard, and any special consistencies to provide for any requirement. The standard consistencies are light, medium, heavy and extra heavy.

Universal Magneto Coupling

This coupling is composed of two east iron halves or flanges, 3 in. in diam., one for mounting on magneto and the other on the drive shaft. Driving is done through a single point, so that even though shafts are out of line, the coup-



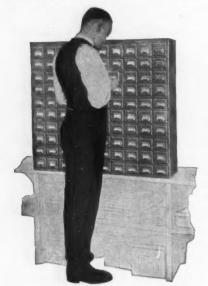
Universal Magneto Coupling

ling will do its work without strain on bearings. The driving pin is fitted to one-half by means of a nut which can be moved to any one of the holes for changing time without disturbing any of the gears. It is made by the Universal Motor Co., Oshkosh, Wis.

Owen & Graham Co., Detroit, Mich., have taken over the rights to manufacture for the United States the Highway non-skid chain.

Universal Screw Cabinet

The Universal Screw Cabinet is a convenient, serviceable and economical cabinet designed for screws, brads, nails, nuts, bolts, automobile accessories and other small articles. It keeps shelves



Universal Screw Cabinet

clean and prevents duplication of stock. It will save its small cost many times in a year in providing a place where every screw or part may be put and where everything can be found instantly when needed. It is substantially built of oak and steel. The back panel is of sheet steel, making the cabinet proof against dust and vermin, and the sides and bottom of each drawer are made from one piece of sheet steel. The back and front of each drawer are wood, making an extremely light and strong drawer that will not stick or bind. The finish is light golden oak, polished brass drawer pulls and card holders. Drawers are 8 x 3 x 21/2 in, inside measures. This Universal Screw Cabinet is made by the Hobart Brothers Co., Troy, Ohio, being furnished in two sizes, 50 drawers, \$19.85, and 100 drawers (as illustrated), \$34.60.

Chattanooga Auto Creepers

The Chattanooga Wheelbarrow Co., of Chattanooga, Tenn., is offering to the trade a new auto creeper. It stands 3 in. from the floor and moves readily in any direction on four roller bearing casters. These creepers are made of hardwood throughout, finished in mission, and it is claimed that the slats will not split



Chattanooga Auto Creeper Showing No. 2, 37 x 18 in.

or come loose. These creepers are built to stand the hard racket of the garage. They come in two sizes, viz.: No. 1, 37 x 22 in., price \$30 per doz., and No. 2, 37 x 18 in., price \$27 per doz. No. 1 has tool rack on each side.

The Main Farm-Lighting Plant

An electric lighting plant which will meet the requirements of a house with 8 to 10 rooms, barn and outbuildings, is being marketed by the Main Electric Mfg. Co., 500 Aiken Ave., Pittsburgh, Pa.

The dynamo is 800 watt, 30-40 volt, with a flywheel type pulley. It is equipped with a sliding base for belt adjustment. Its capacity is 40 20-watt, 16 c.p. Tungsten lamps, and the battery has the hard rubber jar, enclosed type, 6 ampere hour, 30 volt. The combined capacity of the dynamo and battery operating together is 50 20-watt, 16 c.p. lamps for 8 hours.

A 1½-hp. engine will operate this plant. When it is equipped with a 2 or ½-hp. engine its power is available by belt from the engine for operating a water pump, washing machine, etc., at the time of operating the plant. This plant can be furnished with batteries of greater capacities if desired, thus greatly increasing the capacity of the plant.

The engines in the Main electric light plant contain a built-in oscillating magneto and extra heavy flywheels. The cylinder of the engine is a separate casting of close-grained iron, and the base is of tough, soft iron to withstand shocks to which it is subjected. The crankshaft is hot-forged of open hearth steel. The connecting rods are H sections, and the bearings of bronze and babbitt at both ends of the rods are adjustable, removable and interchangeable. The pistons are made exceptionally long. The rings are carefully ground to fit the cylinders as well as the piston groove. The valves are large to permit the quick passage of the gases. The engine is equipped with a vertical governor, driven from the main shaft of the engine. The speed change lever may be used while the engine is in motion.

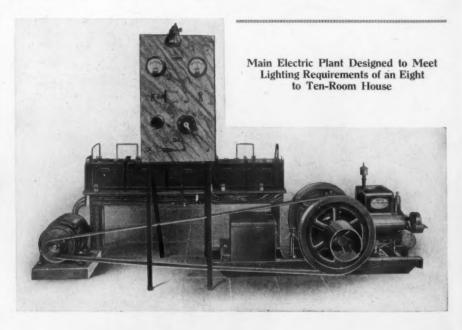
The dynamo being belt driven, can be operated at high speed and is intended to be so operated, while the engine is operated at normal low speed. This results in satisfactory output from the dynamo and long life of the engine.

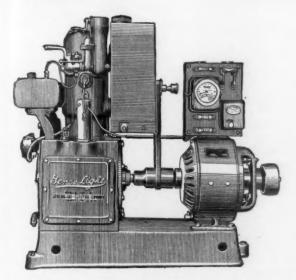
The Genco Lighting Plant

The Genco Light is an individual power and lighting plant composed of three compact units, a gas engine, a dynamo and a battery. Practically the entire lighting plant is manufactured in the shops of the General Gas-Electric Company at Hanover, Pa. It manufactures the engine, generator and storage battery and various other smaller parts. This plant has a capacity for furnishing light in the dwelling, barn and will supply sufficient power to run any electrical device ordinarily used in the home or on the farm. The outfit is equipped for driving a line shaft or machinery direct from the engine.

Genco Light is supplied in 2 styles, the only difference being in the capacities of the batteries. The battery of the B plant has twice the capacity of the A plant. Both outfits are equipped, ready to be set up and put in operation with batteries fully charged.

The engine of this Genco Light is 4-cycle, water-cooled. The crankshaft is counter balanced and has its flywheel inside the crankcase. The connecting rod bearing on the crankshaft is 134 in. diam., 236 in. long. The main bearings on the crankshaft are 1½ x 3.in. The camshaft is integral and ground on all working surfaces. The oiling system of the engine is thorough, even the valve stem being lubricated by the splash. A partial vacuum is maintained in the crankcase of the engine for the purpose of preventing oil leaks. An inspection





The Genco Light, an Individual Light and Power Plant for Use on the Farm

plate permits quick access to connecting rod for adjustment or inspection. The carburetor is adapted for gasoline, kerosene and alcohol. Ignition is by a high tension magneto.

The generator is bolted on the same base with the engine and direct driven by the same through a universal coupling. The field of the generator is compound motor to start the engine and shunt when used as a generator. A centrifugal fan is fitted on the armature shaft for ventilation. The engine is regulated to produce 17 amperes when charging the type A batteries and 20 amperes when charging the type B batteries. There is no governor on the engine, the shunt wound generator being used for that purpose.

Barrett-Built Bodies

The Peter Barrett Mfg. Co., of Brooklyn, N. Y., is a pioneer in body building, having been founded fifty-four years ago. Horse-drawn vehicles had its attention until the coming of the automobile, and since that time commercial auto body-building has been the chief product of its vast plant. Its aim has always been to turn out a good grade of products, regardless of the cost. It has been educated to that policy through dealing with firms and individuals who demand quality.

Little and big refining features known to the trade are incorporated in the Barrett-built body.

Bay City Motor Truck Winch

The Bay City Type D Motor Truck Winch, built by the Bay City Foundry & Machine Co., Bay City, Mich., is self-contained, of the single drum type mounted on a structural steel base for direct assembly in any position on the motor truck frame. The drum flanges clear the floor of the truck or may be

worm and gear. Thrust of worm is taken by self-aligning ball bearing.

The drum is 65%-in. in diameter by 20-in. long, having flanges at each end approximately 14-in. in diameter. It has amply designed bronze bearings and is free to revolve on the shaft when not engaged by the friction. The drum shaft bearings are spherical, and driving worm and worm wheel are carried in a floating case combined with its spherical bearing, thus preventing any binding of drum shaft or breaking of brackets when truck frame is twisted.

The drum is engaged by a friction of ample diameter to handle a maximum load of 5,000 lbs. at a 4-in. radius. The rope speed is approximately 50 ft. per minute when engine speed is 1000 r.p.m. The surface in contact is iron on maple with cork inserts. The friction is applied by means of a spiral faced cam, the friction and cam together being commonly called a "spiral disc clutch." All points of friction in the working of the clutch are fitted with brass thrust washers. The friction end of the drum is provided with an external contracting brake band lined with Thermoid or Raybestos. The full load can be easily and accurately lowered by means of a foot brake lever.

Bay City Type "D"

Motor Truck

Winch

This winch will handle a maximum load of 5000 pounds with engine speed at 1000 r.p.m. The weight of the winch is approximately 700 pounds.



lowered slightly below floor level if desired.

Keyed on the hammered steel drum shaft is a semi-steel worm gear meshing with a steel worm of 2½-in. diametrical pitch. Ratio of worm to worm wheel approximately 20 to 1. The worm is located below the gear and has an extension shaft upon which to mount a gear or sprocket for drive connection to the power take off shaft. The worm gearing is entirely enclosed, providing a continuous oil bath. The housing is separable for inspection or removal of both

This winch will be supplied complete with an 8-in. niggerhead when desired. In this case, the drum shaft is extended beyond the bearings. By applying the drum brake and holding the same by ratchet, load may be held on the drum and the niggerhead operated independently. All bearings are bronze bushed. All parts are renewable and only one adjustment is necessary, this being to compensate for wear of the friction.

The total weight of the winch as described is approximately 700 lb.

Republic Motor Truck Co., Alma, Mich., has received 500 orders for trucks from the Far East during the past four months. During a few weeks recently the company received 250 orders for Republic trucks from China and Japan,

Oakes Co., Indianapolis, Ind., maker of radiator cooling fans for tractors, trucks and automobiles, announces that a large addition to its factory is nearing completion. The new structure will be of reinforced concrete and thoroughly modern in every respect.



A Six-Ton Barrett Body on a Packard Chassis.

Marion, Ohio, Merchants Planning Coöperative Rural Motor Express Lines

By A. V. Comings

EALIZING the utter absurdity of being in the center of a rich farming district, yet having to depend for a large percentage of their farm produce upon railway shipments from points far away, merchants of the city of Marion, Ohio, are going thoroughly into the subject of rural motor express, with the intention of establishing lines radiating from their city in all directions. Not only do they plan bringing farm products to Marion from the country, within a radius of fifty miles, but they also plan distribution of Marion merchandise to the farmers in that district, in a way that will cause the farmers to do most of their trading in Marion.

J. A. Williams, executive secretary of the Marion Chamber of Commerce, is working out plans for the establishment of routes. Mr. Williams is a former railway traffic man and knows the ins and outs of transportation, in a way that will be of great assistance to Marion merchants in establishing the proper distribution of merchandise over rural motor truck lines. He is also thoroughly conversant with marketing methods, as related to transportation, and he has some very excellent ideas which he will endeavor to put into practice, in solving the marketing problems for the farmers in the Marion district.

The Marion merchants are seriously considering forming a co-operative company to operate motor trucks in all directions from their city, these trucks to run on regular schedules and regular routes. They will be used to bring farm produce to the city, and on their return trip will take out to the farmers merchandise from the Marion stores. It is the intention of the Marion business men to carry on a campaign of education with farmers in the district, so that they will naturally turn to Marion for all their Telephone orders sent in in supplies. the morning, or brought in by the express drivers, will be filled the same day. This is a service that is almost certain to meet with ready approval from the

With transportation established, regular and dependable, the farmers will be urged to meet Marion's needs in all manner of farm products, with the result that greater acreage will be planted in the future in the Marion district.

An effort will also be made with large jobbers in other cities, who deal with the smaller stores all through the district covered by these rural motor express lines, to have them consign their shipments in carload lots to the association in Marion, from whence they will be delivered by motor truck to the various

smaller stores within the fifty mile radius. This is a method of merchandise delivery that has not yet been tried elsewhere and which should prove successful if properly handled.

The Marion Chamber of Commerce is very much in earnest in entering into a solution of the marketing and merchandising problem in its district, and whatever is developed along this line will be watched with interest by those who are planning similar systems elsewhere.

A Simple, End-Dumping Light Body

A very remarkable solution of the dumping problem, at least for small bodies, has recently made its appearance in Great Britain. The body is supported in the usual way by bolsters interposed between its under framing and the chassis frame, but there are only three of these bolsters. The body, being trunnioned mid way of its length on the middle bolster, is thus exactly balanced, and the back bolster is hinged so as to fold inwards out of the way, and thus allow the body to be tipped downwards at the back. Being only a light body and perfectly balanced, this tipping is done by The same principle could easily be applied to heavier bodies requiring the mechanical advantage of screw or lever gear. With a body of any considerable length, however, the bolsters would have to be very high to allow the body to be tipped to the required angle, especially if the trunnions are placed midway. In most cases, however, they would have to be placed at about one-third of the body length from the rear end, in which case a mechanical lifting gear would be all the more neces-

Farmers Need Rural Motor Express to Produce to Capacity

Now that the possibility that America will feed the nations of Europe during the coming year has become a fact, the importance of Rural Motor Express lines cannot be too strongly emphasized.

Recently, in a speech before the Highways Transport Committee Council of National Defense, at the Hotel Willard at Washington, Herbert Hoover, United States Food Administrator, said that "famine is to rival war; that starvation is to exceed deaths at the front." He emphasized imperative need of greater productivity here to help.

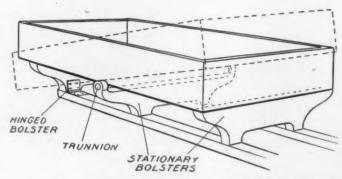
Mr. Hoover further said:

"Europe is burning the candle of present resources and further revenue at both ends, and for ten years after peace comes the productivity of the United States will be called upon to restore the allies and the millions of persons being exploited by Germany.

"The world is never more than 60 days ahead of famine between harvests and in consequence of the draining of men from the usual occupations of food producing, large areas of Europe today are facing starvation.

"If we are to do our duty by the world and ourselves, we must utilize every means to increase production and distribute food efficiently. The development of the rural express, using the highways of the country, commands every moral support of which we are capable. The direct results, which appeal to me strongly at this time, are the labor saved and the productive area extended by the employment of more efficient, mechanical means.

"Another of the results of a perfected highways use would be to cut down waste of perishable foods. Besides stopping this waste, a highly developed rural express would work to establish lower prices. A further effect would be to bring into productive activity the large potential of labor now on the farm, but



The Body is Trunnioned Midway of Its Length on the Middle Bolster, and the Back Bolster is Hinged so as to Fold Inward Out of the Way.

not actively producing. Whenever mechanical transport can be employed there will be a decrease in the number of work animals necessary. Our 25,000,000 to 40,000,000 work animals are eating the crops of an acreage that, planted in food, would sustain 40,000,000 more people.

"Most rural communities are now producing under capacity. The farmers would practice more intensive methods if they could move their products to market. In most cases neither the railroad nor waterways reach the farmer, so he must resort to the highways. He must have a rural express. He must have better highways. We must help him get this service."

New Jersey Refuses Reciprocity to Maryland Trucks

W. L. Dill, Commissioner of Motor Vehicles of New Jersey, has notified the police departments in every municipality and all the automobile department inspectors, that New Jersey has ceased to extend reciprocity privileges to Maryland commercial cars operating in or through New Jersey.

The ban on Maryland is the result of ineffecutal attempts made by Commissioner Dill, the Highways Transport Committee of Washington, State Councils of Defense, and a host of other interests to have the ruling made by the authorities of Maryland rescinded, which is to the effect that operators of trucks and their drivers must take out licenses even for a limited period and less than the 15 days' reciprocity which a section of the Maryland Motor Vehicle Act grants.

Attempts were made to arrive at an amicable settlement but without results. It is also said that Commissioner Dill received a letter from certain Maryland authorities reiterating a previous statement that Maryland had abrogated state reciprocity agreements on trucks operating for hire over the roads of that state.

"There was nothing for me to do but retaliate in kind," said Commissioner Dill. "The ban does not apply to passenger cars here or in Maryland. It is interesting to note that I have received letters from Maryland and from Washington applauding my determination to take a firm stand against the Maryland ruling by putting it into operation against Maryland trucks in New Jersey."

A mild concession has been obtained since this ruling. It is said that the Maryland commissioner has agreed to give a truck owner permission to operate in that state provided the owner will make application by letter for the privilege and assure the commissioner that the 15 day privilege, which will be extended with a letter of permission, will not be exceeded. An official of the Mo-

tor Truck Club of New Jersey, which has been active in attempting to find a solution of the Maryland problem, stated that the letter privilege is not practical as it involved notifying every owner of a truck in New Jersey of the ruling, that it was not an easy matter to determine what New Jersey trucks operated in or contemplated operating in Maryland.

An Acason Wrecking Outfit for Fallen Airplanes

The Acason Motor Truck Company, of Detroit, Mich., recently built and sent to Rockwell Flying Field, at San Diego, Cal., an airplane wrecking outfit which shows an interesting assembly of an Acason light tractor with heavy semitrailer. The tractor is of the well known Acason type, with hauling capacity up to 6 tons, and equipped with Buda motor, with cylinders $4\frac{1}{4} \times 5\frac{1}{2}$ in. The wheelbase is 114 in., with front tread 58 in. and rear tread $58\frac{1}{2}$ in. Solid tires are used.

The semi-trailer presents unusual and interesting features. It is built up of structural steel, has a drop frame of 5 in. channel sides and is 25 feet over all in length, with 20 feet of this length in the rear of the drop. The platform is 82 in. wiide, fitted with stake and slat sides. Connection with the tractor is made through a 30-in. spring drawbar and rocking fifth wheel. Capacity of the semi-trailer is three tons.

Unlike the tractor, the semi-trailer is fitted with Goodyear cord, pneumatic tires, on 38 x 7 in. artillery wheels, each with twelve 2-in. spokes.

Steel channels are provided for runways for loading disabled planes.

The outfit will be used at Rockwell Field for bringing in airplanes which have fallen or which have become disabled through other causes.

K. of C. Still Needs Trucks

"There is greater need than ever over here for motor cars and motorcycles," is part of a cable received today by William J. Mulligan, Chairman of the Knights of Columbus Committee on War Activities, from K. of C. Headquarters in Paris. "We will have at least to duplicate our present motor car service to meet the extraordinary demands upon us over here. Our troops await K. of C. trucks with supplies with as much eagerness as they do the mail carriers or paymasters," the cable continued, and the message urged the immediate shipment of twenty-five additional motor kitchens of an improved model of those used by the Knights of Columbus since July, when Marshal Foch began the great attack. These, in addition to those now in use, will be employed by the K. of C. in caring for American soldiers and sailors abroad while awaiting demobilization.

Fordson Distributors Unite

The Fordson Distributors' Association has been formed to promote the interests of Fordson distributors in the United States. The headquarters of the association has been established at Providence, R. I.

The officers of the organization are: Clyde L. Herring, Herring Motor Co., Des Moines, president; Thomas J. Northway, Rochester, N. Y., treasurer; Harvey J. Flint, Providence, R. I., secretary.

The Canadian Johns-Manville Co., Ltd., has been incorporated with a Canadian charter with a capital of \$1,000,-000. The head office of the company is Toronto. The company already has a number of branches in the Dominion.

General Motors Co., through its Canadian organization, the General Motors, Ltd., has secured a site of thirty-eight acres in Walkerville, Ont., for the erection of a new plant.



The Acason Wrecking Outfit Used to Bring in Disabled Airplanes The Acason Tractor is equipped with solid tires, while the semi-trailer has cord tires

New Jersey Snow-Clearing Plans Perfected

By C. P. SHATTUCK

HE freeholders of New Jersey, which are the governing bodies of the counties, propose to show, through the County Engineers' Association, that it is possible for counties to successfully and economically remove the snow from their highways. Meetings for discussing methods, etc., have been held by the Highways Transport Committee of the New Jersey State Council of Defense, and members of the Boards of Chosen Freeholders, county engineers, supervisors, etc., were present.

T. J. Wasser, engineer of Hudson County and of the Highways Transport Committee, has made a considerable study of the snow removal problem, and has practically perfected his plans for the actual work of snow clearing, which is to be done by the counties, not the state as is done in some instances. The main highways as well as the roads in densely populated counties will be cleared practically down to the road surface. Outlying counties are to remove snow drifts and snow to within four to five inches of the road surface, which is suffi-

cient for operation of sleighs but not enough to interfere with the movement of trucks.

Buffalo-Baltimore Route Must be Kept Open

Inasmuch as the reconstruction period of the United States Government requires that the Buffalo-Baltimore route be kept open, counties through which it passes will give it first attention as they will the road connecting Phillipsburg with Elizabeth and Jersey City, over which highway coal is transported from Easton, Pa., to New Jersey, thence to

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miles distant.

Trade Literature

Link-belt Roller Chains, Bulletin No. 368, Link-Belt Co., Chicago, Ill. A bulletin descriptive of the types of chains made by the Link-Belt Co., and including a table of dimensions of roller chains, with prices. A table giving the details of the chain drives on the various makes of trucks is also included in the circular.

The Companies Timken Keeps. Timken Roller Bearing Co., Canton, Ohio. A 24-page booklet, which lists the builders of passenger and commercial cars, farm tractors, axles and transmissions, who are using Timken bearings on their present models.

Standard Equipment Co., Cleveland, Ohio, has recently completed a new factory building in which it will carry on the manufacture of Scott Pat sockets for one-man tops for automobiles. The building is located at 106th St., near Lorain Ave.

Titan Truck Co., Milwaukee, Wis. Circular giving details of construction of the 31/2 and 5-6-ton chassis made by the Titan Truck Co. Another circular gives complete specifications of the trucks, and illustrates the factory hill-climbing test given every Titan truck. A third circular is devoted to an explanation of the advantages of the internal gear drive axle for trucks.

How to Keep Tab on Your Motor Truck. Service Recorder Co., Cleveland, Ohio. A booklet explanatory of the operation of the Servis Recorder, a device for checking up on time spent in making deliveries, etc. This book should be of interest to every truck owner who employs men to drive his trucks.

Schubert's Long Distance Mileage

Book. Published by Daniel Schubert, 2 Columbus Circle. New York City. This book should be of value to truck owners operating within a hundred-mile radius of New York City. It gives an alphabetical list of 846 towns and cities, and the mileage of each point from New York city, and contains a map giving 29 routes north, west and south of New York City. The book also includes data on ferries and a complete list of the Return Loads Bureaus in the Eastern cities. This book has been compiled from Mr. Schubert's own experience. He has conducted a motor-truck route in this territory since

Baltimore Automobile Dealers' Association has sent a bulletin to each of its members, urging them to co-operate with the Merchants' & Manufacturers' Association of Baltimore, which has charge of the Return Loads Bureau in

Truck Fleet Carries High **Explosives**

Six Five-and-a-Half Ton Loads Cover Six Hundred Miles in Thirty-Five Hours **Actual Running Time** By SAMUEL SAYWARD

Transportation of highly explosive ammunition over the road by a fleet of motor trucks for a distance of more than six hundred miles, has been accomplished without mishap. So far as is known, it was the longest trip ever made by a fleet of motor trucks, with high explosives, on this side of the Atlantic.

The six 5-ton trucks, all belonging in Newark, N. J., were loaded to capacity with highly explosive ammunition at the DuPont Powder mills in Pompton Lakes, N. J., 28 miles south of Newark and were turned over intact to officials of the United States Cartridge Co., at Lowell,

At one o'clock on the afternoon of a certain Tuesday, the six trucks left the DuPont plant and they reached their destination Thursday at midnight. Out of the 59 hours actually consumed by the trip 16 hours for sleep for the drivers and six hours for refreshment were deducted, making the actual running time 37 hours for the trip or an average speed of 16 m.p.h. As a matter of fact, the time was even better than that, for on Wednesday night the train of trucks arrived late in Springfield, Mass., and the drivers turned them over to the commandant at the United States arsenal in that city for safe keeping, the delay and time required consuming more than two hours. The commandant receipted for them and placed an armed guard over them that night. The drivers were offered beds at the arsenal but hotel rooms had been reserved for them by

Each of the trucks bore signs that they carried rush orders of explosives for the United States Government. While each truck's capacity was marked at five tons. each truck actually carried five and a half tons of explosives. Before the trucks started, their respective drivers were frankly told the contents of each load, and were told that the mission was a patriotic one. Not one of the drivers backed out.

The trucks were owned by A. Lario, the Miller Co.; L. Devoe, A. Peterson, one truck each, and two trucks belonged to the Standard Trucking Co., all of

Through the efforts of the Lowell Chamber of Commerce, return loads were secured for all six trucks to New York City from a Lowell manufacturer.

While this is probably a record for long distance hauling of high explosives in the East, the hauling of similar material for short distances is now quite common. Explosives and chemical manufacturers are equipping their plants with many trucks, some already owning as many as 26 flat and specially constructed tank trucks, engaged in hauling muni-

work. These forms are 8 x 13 in, and are made up in pad form. Advance Weather Reports

New York. The attention of truck op-

erators is directed to the detour neces-

sary because of constructional work on

the Buffalo-Baltimore route. The detour,

which practically parallels the main high-

way, begins at New Brunswick and

passes through Dayton, Hightstown, Windsor, etc., ending at Trenton, 24.7

Mr. Wasser has compiled a form

which, by the way, has been copied and

sent out broadcast by the Highways

Transport Committee at Washington.

This form provides means for those in

charge of the work in the twenty-one

counties to tabulate data important for

reference to conditions, cost, equipment

utilized, men employed, hours, etc.; in

fact, all information bearing upon the

Weather reports are to be distributed to the supervisors seventy-two hours in advance. The engineers of the various counties are to receive complete information as to organization etc., and no hard or fixed rules are to be laid down as conditions vary. Those in charge will, however, be looked to for results and as Mr. Wasser said, can be relied upon to co-operate with the Government in keeping the New Jersey highways open for highways transport this winter.

Demand for American Cars in Far East

A recent report on the automobile situation in the Far East issued by the Bureau of Foreign and Domestic Commerce is entitled, "Motor Vehicles in Japan, China and Hawaii," Special Agents Series No. 171. It is concerned largely with instructions as to how cars may be sold in the countries considered.

According to the report the sale of cars in China and Japan is largely dependent upon the condition of the roads in those countries, which are almost universally bad. There is a tendency, however, in the direction of better road construction, and Mr. Jones emphasizes the importance of developing foreign trade relations as a means of enabling the factories to increase production during the dull months from October to March.

Hawaii, according to this government report, has purchased more cars than China and Japan combined, sugar companies having found it economical to haul workmen to and from the plantations each day in motor trucks.

Copies of the report can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at fifteen cents each.

Southern Truck & Car Corp., recently organized at Greensboro, N. C., for the manufacture of trucks, tractors and bodies, has elected J. A. Norford, president, and H. P. Christie, vice-president, secretary and treasurer.



The Panhard Model B Chassis

HE big feature of the 1½-ton Panhard truck, known as the model B, is the twin-frame construction, an arrangement to prevent the sagging of the frame under strain and prevent the twisting of the frame due to uneven loading. This feature allows the front end of the frame to be positioned directly over the front spring pad and the rear section to extend outward at the wheels. This construction relieves the hangers from twisting strains.

The Panhard Motors Co., of Grand Haven, Mich., the maker, also has incorporated standard units in this chassis. These units were chosen because of their dependability and efficiency, and each one is capable of standing the strain of overload. Chrome vanadium steel is used in many parts, and the power and speed secured from the overhead valve engine has been found sufficient for any other truck of this capacity.

Mechanical design and excellent material have been considered in the construction of the Panhard, with due attention to the appearance. The finish is olive drab in the chassis portion, hood and fenders being black enameled. The price of the truck is \$1,395, including electric head and tail lamps, electric horn, jack and tool kit. The front fend-

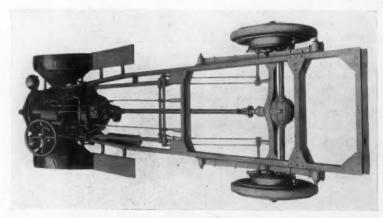
ers are also supplied with the chassis, the rear fenders being supplied with the express body only.

Detailed Specifications

The conventional type of power plant, for a truck of this capacity, is used, the

valves. Oil is distributed by a force feed system. Cooling is by thermo-syphon system.

The radiator, a Perfex, is fin-head type shell in which the core is easily removed. Ignition is by the Auto-lite combined generator and ignition system with a



Plan View of the One and a Half Ton Chassis, Showing the Twin-Frame Construction, Which Prevents Twisting of the Frame Due to Uneven Loading

engine clutch and transmission being three-point, mounted at the front end of the chassis. The engine has 4 cylinders 3½ x 5 in., cast in block, with overhead Connecticut distributor. The battery is a Willard six-volt. The carburetor is a Stromberg, Model M-I, to which gasoline is supplied by the Stewart-Warner system.

The Axles

The transmission is a Fuller selective sliding gear type with annular ball bearings. Drive to the rear axle is through a tubular shaft, with double universal joints.

The rear axle is the Torbensen internal gear drive with roller bearing equipment throughout. The front axle is very heavy I-beam construction and equipped with roller bearings.

Semi-elliptic springs are used both front and rear. The service brake is of the external contracting type, and the emergency of the internal expanding. Both are lined with a good grade of brake lining. The wheels are artillery type, built especially for truck use, 32 x 3½ in. front and 32 x 4 in. rear, and they are equipped with Firestone tires of these sizes, solid both front and rear. The wheelbase of this truck is 130 in. and the tread standard.



Stake Body Mounted on Panhard Model B Chassis
The truck is made up of standardized units. The price of the chassis is \$1395

Acme Announces Five-Ton Truck, Model E

HE Acme Motor Truck Company, of Cadillac, Mich., announces the production of a new 5-ton truck which is known as Model E, and which completes the Acme line. The new model is equipped with the latest Continental Red Seal production, the type B-2 engine.

The entire Acme line is Continental Red Seal equipped, the 1-ton being powered by a 3½ x 5-in. engine, developing 35 hp. The 2-ton has a 4½ x 5½-in., 40 hp. engine; 3½-ton, 4½ x 5½-in., 45 hp. engine, and the 5-ton, 4¾ x 6-in. engine, developing 55 hp.

Throughout the 5-ton Acme the factor of oversize design predominates. Each Acme model takes a different size means of centrifugal pump. The oiling system is of gear type oil pump, force feed to crankshaft, connecting rod, camshaft, piston pin bearings and the gear case. Splash for cylinder wall.

Eisemann magneto with impulse starter. Carburetor, Rayfield; special design governor, mounted on gear case cover and driven from generator drive shaft; type, fly ball; built integral with engine limiting speed to 1250 r.p.m. or 12½ m.p.h.

Timken front and rear axles, Borg & Beck single dry plate clutch. Ross irreversible steering gear, nut and screw type, 22-in, wheel.

Propeller shaft, heat-treated steel, 11/2-diam., with two universal joints between

engine and transmission, and a 134-in. propeller shaft of heat-treated steel with two universal joints connects transmission to rear axle.

Two sets of brakes on rear wheels, internal double knuckle, 24-in. diam.; self lubricating, bronzed bushed springs; front, 3 in. wide by 44 in. long; rear, 4 in. wide by 56 in. long. Rolled steel section, semi-flexible, radius rods; gasoline tank of welded steel, capacity 26 gal., located under driver's seat; Stewart vacuum tank; cast steel wheels, 3-in. spokes front, 4-in. spokes rear; tires, front, 36 x 6 in.; rear, 40 x 6 in. dual; equipment consists of seat, lamps, horn, jack, tools and tool box. Chassis finished in gray lead priming coat.

Rowe Pneumatic-Tired Speed Job, Model GW

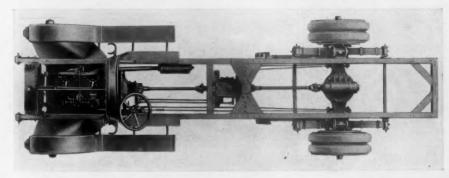
The Rowe Motor Mfg. Co., of Lancaster, Pa., has added a new model for 1919 to its line, namely, a 3-ton pneumatictired truck, designed especially for speed and known as Model GW. This truck is equipped with Herschell-Spillman 8-cylinder engine, Brown-Lipe 4-speed transmission, Ross steering gear, Sheldon axles and M. & E. Universal joints. The front tires are 38 x 7, rear 42 x 9, all weather tread cords. Westinghouse starting and lighting system, Atwater Kent distributor and Willard storage battery are furnished as standard equipment. This company states that it is the first to market a truck of this type designed especially for speed with large pneumatic tires.

Tests being made with trucks now in operation show an average speed with load of from twenty to twenty-five miles per hour. The same policy of construction is carried out in this model as in other Rowe products as regards rugged frame construction, expert workmanship and the very best units obtainable.

Rowe dealers who have witnessed the performance of these high-speed trucks are enthusiastic and from all indications the increased capacity of the Rowe plant will be taxed to the utmost to supply the demand for this model in addition to the regular line of Rowe heavy duty trucks from 2 to 5 tons capacity.



Side View of the Chassis of the New Acme Five-Ton Truck



Plan View of the Latest Addition to the Acme Motor Truck Company Line, the Five-Tonner

of engine, clutch, transmission, axle and frame and each calls for an adequate factor of safety. For instance, the frame in the 5-ton model is 9 in. deep, made of pressed steel and heat treated. Like all other Acme models, it contains a Cotta transmission, gears of which are always in mesh.

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Specifications of the new model follow: Capacity, 5-ton; chassis rating, including weight of body, 13,000 lb.; maximum on rear axle, 80 per cent. of body weight and load; chassis length, 261 in. over all; tread, front, 6836 in.; rear, 691/2 in.; wheelbase, 180 in.; loading space, 180 in.; turning radius, 32 ft.; weight, 8500 lb.

Radiator is cast tank type, easily detachable, supported from the bottom on cushion base. Water is circulated by



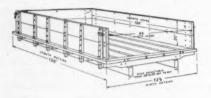
One of the New Rowe Model GW Trucks, Owned and Operated by Lester S. Fortnum, of Bridgeboro, New Jersey

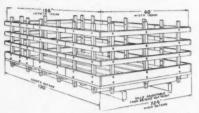
Parry Announces New Heavy Multiservice Truck Bodies

The Parry Manufacturing Company, of Indianapolis, announces that it is now manufacturing, on a large production scale, a new truck body known as the Parry Universal Multi-Service Body.

This new body is built in three styles—Express, Stake and Stock—and will fit any make of truck chassis, the frame length of which does not exceed 130 in. back of driver's seat. It can be easily and quickly mounted by the truck dealer. This body is especially adapted to trucks of 1-ton, 1½-ton, 2-ton, and 2½-ton capacities.

These Parry Universal Multi-Service Bodies have a patented adjustable sill feature, whereby they can be quickly and

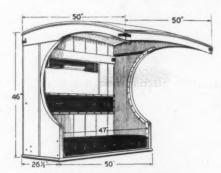




The Sills on These Bodies Are Adjustable and Can be Set to Fit Any Truck Chassis

rigidly set to fit any truck chassis with a frame width of from 28 to 43 inches outside dimensions. The platform (which is of the same construction in all three styles) is 130 inches long and 72½ inches wide, outside measurements.

The floor is 1½-inch well seasoned Long Leaf Pine, ship-lapped—making it grain tight—with 5 heavy steel strips lengthwise on the floor and strips on each end. The stake brackets are set flush with the outside and cannot be



Cab Furnished With the Universal Multiservice Body

knocked off. Bolts are used throughout. The outer edge of the platform is steel banded. The platform is supported by $\sin 1\frac{3}{4} \times 4\frac{1}{2}$ cross-sills and two $2\frac{3}{4} \times 5$ -in. hardwood sub sills.

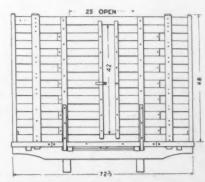
On this platform can either be mounted a set of 36-in. stakes for city draying; 20-in. grain tight express sides and end-gate; or a set of 48-in. racks for hauling live stock. They are easily interchangeable as the need requires.

A special feature of the stock racks is the end-gate construction. This stock rack end-gate has a sliding door feature which when opened gives an entrance space of 25 inches wide and 45 inches high, large enough for hogs or medium size stock. If extra large stock are to be hauled, the end-gate can be removed in a minute's time.

Due to the knock-down construction of these bodies, a large amount of ware-

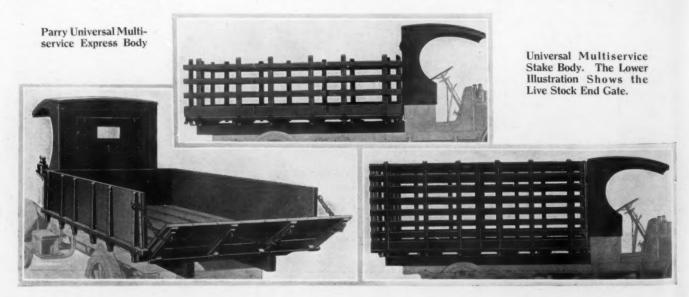
house space is saved. A dealer need only stock a few platforms and carry as accessories a set of stock racks, panels and stakes. It is then a very simple matter for the truck dealer to mount upon his newly-sold chassis the truck body that will fit his customer's particular kind of business.

Due to the standardization and large production on these bodies, the Parry Manufacturing Company claims that it is able to maintain same-day shipments to the truck dealer. The platforms are not crated—a big saving in freight. The express sides, stock racks and stakes are all crated separately.



The Sliding Door When Opened Gives an Entrance Space of Twenty-Five Inches

The Parry Universal Cab is built entirely separate from the body. The framework of this cab is of hard-wood construction. Cab is shipped knocked down and crated and is very easily and quickly made up and mounted. The cab is equipped with brackets for mounting cab to the truck seat. A special soft riding cushion is also supplied with this cab.



Tractor-Truck and Trailer Equipped With Air Brakes Completes Akron-Boston Run Successfully

TWO-TON Walter tractor hauling a five-ton Troy trailer carrying a total load of 7 tons, 300 lb. of Goodyear products, including military balloons, etc., recently completed the first trip ever made over the Akron-Boston road, with truck or trailer fully loaded. This is also the first time that a trailer with capacity load has ever been hauled over the Allegheny Mountains. This feat was made possible only by a new system of air brakecontrol, which was fitted to both the tractor and trailer and which are made by the Parker Air Appliance Co., of Cleveland, Ohio. Such trucks as have been regularly covering this route from Akron to Boston do not carry full capacity loads on account of the steep grades encountered, which are in some instances six miles in length and usually burn out the brake linings on the down grades.

To overcome this difficulty was the object in sending this equipment over this

route, as well as with the idea of more economically hauling large tonnages quickly between Boston, Mass., and Akron, Ohio.

The tractor is the four-wheel driven job made by the Milwaukee Locomotive Mfg. Co., Milwaukee, Wis., and is the same model as that furnished to the French Government last year for artillery work. With the Parker air brake fitted to the tractor as well as to the trailer, it is possible to keep the trailer

from trying to get ahead of the truck when running down the hills, with the attendant danger of throwing the entire outfit off the road.

The Parker air-brake system is comparatively light in weight. With two brakes on the tractor and two on the front wheels of the trailer the weight is about 75 lb., including compressor tank, valves, piping, etc.

One of the illustrations shows the airbrake cylinder as it is applied on the

The Small Air-Brake Cylinder and Hose Connections as Applied on Front Wheels of Trailer, and Rear Wheels of Tractor-Truck



USZUB

Close-up of the Hose Lines and Connections. One Line Couples the Two Reservoirs, While the Other Connects With the Trailer-Brake Valve, Which Distributes Air to Both Brakes on the Trailer

front wheel of the trailer. This cylinder is about 2½ x 6 in. in size, air being supplied to the cylinders from two reservoir tanks, one mounted on the tractor and another on the trailer and both connected by a system of pipings so that the pressure from both reservoirs is uniform. The air compressor consists of a Kellogg 4-cylinder pump, fitted with a special head furnished by the Parker Co., and supplies air to the reservoirs at about 90-lb. pressure.

A small push pedal on the footboard operates all brakes simultaneously. The air brakes do not interfere with the operation of the regular emergency brake fitted to the tractor. The air brake



The Walter Truck and Troy Trailer, Which Was the First Outfit of Its Kind to Travel Over the Allegheny Mountains With a Full Load

permits gradual and equal application of the brake action to all four wheels and eliminates the continual adjustment or wearing out of one brake before the other. A special feature of the braking outfit is that the brakes are automatically set in case the trailer should in any way become disconnected with the tractor. This feature proved its usefulness when, in one instance, on another test, the trailer broke away from the tractor and started down a hill nearly a mile long; but the air brakes worked automatically and stopped the trailer within its own length.

Standard Motor Truck Co. Detroit, Mich., is erecting an addition to its plant No. 1. The structure will be 65 x 175 ft. A second unit of the same size will be constructed upon the completion of this building.

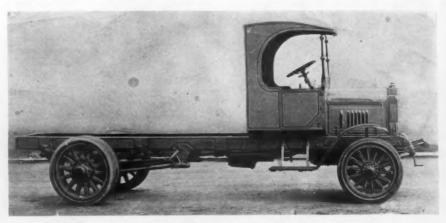


Columbian Hoist for Truck Bodies
The features of this hoist are: The concealed

The features of this hoist are: The concealed gear system, and the little amount of space that is necessary for its complete installation. Also its ease of operation.

Titan Adds Three and a Half Ton "Hi-Way Transport" Chassis

HE Titan Truck Co., Milwaukee, Wis., has added a 3½-ton special speedy chassis to its present 5-6-ton heavy-duty model, this new model being, with the exception of the springs and spoked wheels, of practically the same design and construction as the larger chassis. This new model was designed circulated by centrifugal pump through a zig-zag tube radiator, made by the Perfex Radiator Co., radiator case being made of pressed steel. Lubrication is provided to all moving parts by full pressure exclusively. The Stromberg carburetor is used, and is fed by gravity from a tank mounted under the driver's seat. The engine is fitted with a Duplex



The New Titan Model, a Three and a Half Ton Chassis Designed for Inter-City Hauling

This new Titan three and a half ton chassis greatly resembles the five to six ton model. The price is \$4300, with electric lights and cab, as shown herewith. It is designed to travel at a maximum speed of 16 m.p.h. and is built to withstand the road shocks in traveling at this speed.

especially for inter-city haulage, the important item of speed receiving special consideration. The gear-reduction is such as to produce a road speed of approximately 16 m.p.h. As protection against all strains, the motor, clutch, transmission and frame of this 3½-tonner are the same as those of the 5-6-ton Titan, and all wearing parts in the chassis are protected by bronze bushings. The wheelbase is 162 in.

A 4-cylinder Buda engine, $4\frac{1}{2} \times 6$ in., is used. The engine is cooled by water

centrifugal-type governor, which limits the truck's speed to approximately 16 m.p.h. and the engine speed to 1,000 r.p.m. A dual ignition system is used, current for starting being supplied by storage-battery, charged by a generator, the second source being a Bosch high-tension magneto. Manual spark-control is provided on steering-gear column.

From the engine the drive is transmitted through a Borg & Beck dry-plate clutch, faced with Raybestos, to a constant-mesh, individual-clutch, Cotta Selective type, 3-speed transmission. On the new model, as on the 5-6-tonner, the drive is taken from the gear-set to a Clark internal-gear rear axle by a tubular propeller-shaft equipped with Army-type metal universal joints. The gear ratio is 8:1 on high. The rear axle is mounted on Sheldon semi-elliptic springs, which take the torque, propulsion being through radius rods, this latter being claimed an exclusive Titan feature as regards internal-gear drive trucks.

Both sets of brakes are on the rear wheels, the hand brake being of the internal-expanding type and the foot brake of the external-contracting type. Each brake has a drum width of 3 in., with a diameter of 20 in. The frame is made of pressed steel of the semi-flexible type, 8 in. in section, of 14-in. stock with 3-in. flanges, manufactured by the Parish & Bingham Co. The tires are 36 x 5 inches

The Columbus Tongueless Lift-Truck

The advantages of this ingenious piece of mechanism are many, and among them are these: Turns within its own area; truck is not raised or lowered by a long-handle tongue and can be operated in small space; for factory use and as a trailer behind a tractor; a lifting device—automobile—automatic—no devices to lock or unlock, simply move ratchet lever back and forth; constructed of malleable iron and steel and high-grade cast iron; equipped with Hyatt Roller bearings and ballbearing swiveled front axle; special coupling bars for turning sharp corners; coupling eyes cast on each end for connecting to gasoline or electric tractor; capacity up to four thousand pounds; four wheels under truck. Built in two widths, 20 to 72 inches, and is manufactured by the Columbus Lift-Truck Company, Columbus, Ohio.



on the front and 40x5 dual on the rear. A large, roomy fore-door driver's cab, fully cushioned and curtained, with two-section glass windshield, is furnished with each chassis as standard equipment. Powerful electric dash lights and electric tail-lamp are also included in the price, \$4,300 f.o.b. Milwaukee.

The S. A. E. Has Washington Section

The chief interest of the meeting of the Society of Automotive Engineers, held in Washington recently, centered about the establishment of a section of the society in that city, and the value of such a branch in securing co-operation with the Government. Several hundred members and guests were present. Army and Navy officers talked interestingly on internal combustion engine work.

Temporary officers for the Washington section were elected as follows: Colonel James Furlow, Motor Transport Corps, temporary chairman; Orral A. Parker, Division of Military Aeronautics, temporary vice-chairman; Herbert L. Chase, temporary secretary, and Arthur B. Cumner, Washington representative of the Autocar Co., temporary treasurer.

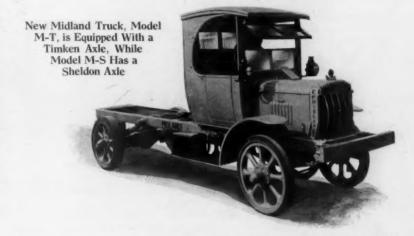
Louisville Wants Tool and Pattern Plant

The establishment of fifty-nine metal working plants in the Louisville Industrial District has accentuated the need of a local pattern and tool shop.

A special committee composed of representatives of a number of large manufacturing concerns has been appointed by the Million Dollar Factory Fund of Louisville for the purpose of negotiating with manufacturers of tools, dies, wood and metal patterns with a view to establishing a tool and pattern plant in that district.

The Midland Models M-T and M-S

ORM drive motor trucks of 2and 2½-ton capacities known as the models M-T, a 2-ton equipped with Timken axle, and M-S, 2½-ton equipped with a Sheldon axle, are being manufactured by the Midland Motor Car & Truck Co., of Oklahoma City, Okla. Various units in this truck have been standardized and are well known to the commerrent is supplied by an Eisemann magneto, and a Stromberg carburetor supplies the combustible mixture. Lubrication is by force feed throughout. A Duplex governor is standard equipment. The Borg & Beck single plate dry disk clutch and the Brown-Lipe transmission with 4 forward speeds complete the power plant. Sheldon semi-elliptic springs are used in front and rear, the



cial car industry. In the manufacture of this truck the small details of design have been given unusual attention. This combined with the standard units leads the maker to believe that the Midland truck will give unusual service.

The equipment includes the driver's cab with windshield and winter fittings, the dash, foot boards, front mud guards, side and tail lamp, horn, jack, odometer and a complete set of tools. The engine is a Buda rated at 2.9 hp.; 4 cylinders 4½ x 5½ in. with a maximum engine speed of 1000 r.p.m.; ignition cur-

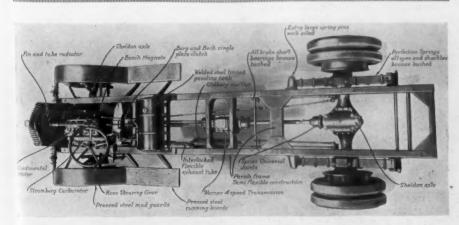
former 43 x 2½ in. and the latter 56 x 3. The artillery type wheels have 2-in. spokes in the front and 2½-in. in the rear, and are equipped with tires 36 x 4 and 36 x 7 in. respectively. The frame is made of pressed steel with a 6-in. side rail, 2¼-in. flange and ¼-in. stock.

The brakes, both service and emergency, expand in 18-in. drums on the rear wheels, these being $4\frac{1}{2}$ in. wide. An irreversible type Ross steering gear with an 18-in. wheel is standard equipment. The radiator is a cast tank, fin-tube type, and is cushioned. The gasoline capacity is 25 gal.

Sixteen gauge steel is used in the manufacture of the fender, and the hood is 3 ft. in height. The drive at the rear is through the springs, Hotchkiss type. The approximate weight of the chassis is 4600 lb. The overall length is 8 ft. 10 in. and the width 6 ft. The loading space provided by this chassis is 11 ft. and the road clearance at the front axle is 12 in., at the rear 11 in. The wheelbase of this truck is 150 in., the tread is 58 in. front and rear, and the speed 16 m.p.h. The chassis price is \$3000. This model is equipped with Timken worm-drive axle, of the full floating type.

The Two and a Half Ton Model M-S

The details of this model correspond with the 2-tonner, model M-T, in all details except the rear axle, which is a Sheldon worm drive semi-floating type. The weight is 4800 lb., and the price of this chassis is \$3150.



Plan View of the Latest Sanford Model W-50 Five-Ton Truck

This five-ton Sanford chassis is equipped with the following standard units: Sheldon axle, Continential E-4 engine, $4\frac{1}{2} \times 5\frac{1}{2}$; Bosch magneto; Stromberg carburetor; Borg & Beck clutch; Ross steering gear, and Spicer shaft and joints. The transmission, shown amidships, has four speeds forward. The wheelbase is 174 in., and the tires are 36×5 in. in the front and 40×6 in. dual on the rear. The equipment includes cab top, curtains, cushions, lamps, tools, jack, etc.

Delivering Goods to a Chain of Grocery Stores is Easy if You Adopt the Right Method



By LEN G. SHAW

HE C. F. Smith Company operates the largest chain of grocery stores in Detroit and vicinity. They number 182 and cover an extreme radius of twenty-five miles. Of these 168 are in Detroit. To the north, there are five in Pontiac, twenty-five miles distant; one in Birmingham, sixteen miles; three in Royal Oak, eleven miles; one in Ferndale, nine miles. To the northwest, there is one store in Redford, fourteen miles from the city and one in Farmington, twenty-one miles. To the west there is one in Dearborn, nine miles, and another in Wayne, nineteen miles.

Inasmuch as these stores are all served from a central warehouse in Detroit it will be seen that the transportation problem is one of magnitude, as each store does a very large volume of business. Since they are all of the cash and carry type there are no retail delivery systems to maintain, and the question of getting stock from the warehouse to the 182 stores monopolizes the attention of the traffic department.

This task is materially simplified by good roads. The trucks never leave the pavement save in one place, where there are five miles of gravel that is hard, but quite rough. Also, there are few grades of consequence, which is fortunate, because the trucks are usually loaded to rated capacity.

A fleet of eighteen Packard trucks is employed. Three of these are of 1-ton capacity, two of 3-ton, five of 4-ton, six of 5-ton, and two of 6-ton.

Delivery is divided into five departments, each with its own loading station, a radical departure from the conventional practice. These departments are: (1) Staples, such as sugar, salt, soap, flour, canned goods, etc.; (2) produce,

including perishable goods only, such as potatoes, apples, lettuce, butter, eggs, etc.; (3) tea, coffee, spices, bottled bluing, bottled vinegar, glass mustard, etc.; (4) baking department, bread only; (5) banana department.

At first glance it would seem that a division like this must result in duplication of effort, because the various trucks cover much the same territory. However, it is claimed that this practice has been found more advantageous than that of carrying mixed loads.

In the staple department deliveries are made to every store daily, one 3-ton, two 4-ton, two 5-ton and two 6-ton trucks being employed. Produce also goes forward daily with one 3-ton, two 4-ton and four 5-ton trucks. Twice a week suffices for the tea and coffee, with a 4-ton truck doing the work. Bread deliveries are made daily to each store excepting those in Pontiac, Redford, Farmington, Dearborn and Wayne. As all the bread must be in the stores before 9 A. M. each of the 1-ton trucks makes one trip, and three extra trucks are hired every morning for a single run. The rest of the day the three 1-ton trucks owned by the company are kept busy delivering bananas.

This arrangement, it is pointed out, obviates confusion, the chances of a mixup being less than if each truck carried a miscellaneous assortment.

All orders are written in triplicate, one being used as the driver's sheet, another as the invoice, with the original filed in the office. This detail would not be of interest here were it not that it casts light on the checking-up methods employed. When a driver comes in from a trip and reports something short, a man in a Ford runabout takes all his sheets and follows the same route covered by

the truck, usually finding the missing items.

Every truck has a driver and helper with the exception of the 1-tons, which have a driver only.

The drivers receive from \$26 to \$30 per week, according to time served, the helpers from \$19 to \$23, according to merit. In addition each man receives twenty-five cents breakfast money every morning provided he is on the job at 5 A.M.

One-ton, 3-ton and 4-ton trucks are required to make three trips per day, the 5- and 6-tonners handling two loads. For each and every trip above the required number both driver and helper receive an additional dollar. All suburban town trips count the same as two city trips. No trucks are allowed on the streets after dark. Under this arrangement the average of each day's run is about 65 miles.

"With wages and extras our drivers make from \$33 to \$40 per week, and the helpers average \$27 to \$30," said H. A. Friedman, secretary of the company, in discussing the plan. "We have experimented with time work, paying so much an hour and all above nine hours on an overtime scale. We found it very unsatisfactory because the drivers did not make as good time on the road, consequently our financial loss was not alone from the added hours but also because the stores suffered from lack of goods on hand. We hire no new drivers, making it the practice to advance a helper when there is an opening. Our truck drivers, checkers and warehouse men are given special orders never to overload a truck, and we see to it that those instructions are heeded."

No special loading devices in the way of bodies, etc., are employed. As mentioned, each department is separate and distinct, with its own loading docks, so that there is no delay or confusion. All orders from the stores are received at night, and loading proceeds rapidly in the morning. Produce is frequently transferred from cars on the railroad sidings at the warehouse direct to the trucks, thus saving extra handling.

Owing alike to the rigid restrictions on overloading and the systematic inspection, maximum service is obtained from the trucks.

All repairing is done in the company's garage, and a driver is required to report the condition of his truck to the garage foreman every evening. Any needed repairs are taken care of immediately. The mechanical equipment is such that it is possible to give a truck a thorough overhauling and painting in a week's time, two men and the driver of the truck doing all the work with the exception of the painting, for which a regular painter is employed.

Every truck is given a thorough inspection every month by the Packard Motor Car Company, and the records generally come back O. K. If not, it is up to the garage foreman to explain why. Every driver and helper is required to fill his truck with gasoline and oil at the end of the day's run, also to oil and dope the springs, oil cups, etc.,

every afternoon. Oil in the transmission, universal joints, differential and crankcase is drained and replaced with fresh every four weeks.

Carefully kept records show the average miles per gallon of gasoline to be:

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-	6-ton	trucks																		4	1/2		mile

The tire equipment of the fleet is varied. One 1-ton truck has 37×5 -in, pneumatics on the front and 38×8 -in, on the rear. Another 1-ton is equipped with 37×5 -in, pneumatics on the front and Sewell cushion wheels with solid tires on the rear. The third 1-ton has regular wheels and cushioned solid tires all the way around. The old style, 3-, 4-, 5- and 6-ton trucks are all equipped with Sewell cushion wheels, with solid tires, the new 4-, 5- and 6-ton with Sewell cushion wheels, with solid tires in front, and solid iron wheels with solid tires in the rear.

Denby Moto. Truck Co. has purchased a tract of land at Chatham, Ont., and will erect a plant there at a cost of \$20,000. It will be ready for occupancy March 1. The Denby company has purchased the plant of the Chatham Brass Works and will manufacture there axles and transmissions.

White on Highways Industries Board

Windsor T. White, president of the White Co., Cleveland, Ohio, has been chosen by the directors of the National Automobile Chamber of Commerce to represent that organization on the board of the Highways Industries Association. Motor truck manufacturers will thus be given a voice in the proceedings of the organization which has for its function the maintenance of the highways so important to motor truck traffic.

Government Orders for Gas Cancelled

A promise of the release of gasoline for public service is found in the recent cancellation of Government orders for 50,000 barrels monthly of aviation fuel placed with mid-continent refiners.

Priority is still given to overseas requirements of gasoline over that needed for domestic use, but refining activities are being spurred to meet the exceptionally heavy demand for emergency purposes. It is expected that fuel oil will be in even greater demand this winter, as many industrial plants will be shut off from making natural gas, which will be diverted for home heating.

Diamond T Motor Car Company Builds Concrete Testing Track

All Diamond T Trucks are given a complete and careful test before delivery and in the past this work was done on the streets of Chicago, in that section of the city where the Diamond T factory was located. This was an undesirable condition, as there seemed to be no way of controlling or supervising the work of the testers. The company tried a cinder track, which was placed beside their factory, but this proved unsatisfactory because the trucks dug large holes in it





When this company began filling large orders from the Government for Liberty B Trucks, each one of which required a fifty-mile test, each one of which required a fifty-mile test, it became necessary that some scheme be devised whereby the trucks could be tested sufficiently and at the same time be kept on the company's property. Therefore it was decided to build a one-third-mile concrete track. This track has many advantages: The trucks are cleaner after being tested; more trucks can be tested per day than in the past; insurance rates are lower, because the tests are made within the boundary of this company's property; and a more uniform standard for testing trucks under all weather conditions is now possible.

Case Threshing Machine Company Announces New 15-27 Model Tractor

Simplified Frame Construction, Direct Drive on Pulleys, Thermostatic Water Temperature Control Are Some of the Distinguishing Features

OTOR truck dealers will be interested in the new model 15-27 kerosene tractor which has recently been developed by the J. I. Case Threshing Mach. Co., of Racine, Wis., and which now is in actual production. The price of the new model is \$1600.

The new tractor is built along the same lines as the 10-18 tractor, which was developed during the past season.

The Case 15-27 is a 3- to 4-plow machine, and, because of its speed range of from 2½ to 3½ m.p.h., it is well adapted for road hauling. In general dimensions the machine is 127 in. long, 72 in. wide and 68 in. high. The weight is distributed so that 66 per cent. is carried on the drive members. The drawbar is 14 in. from the ground. The machine weighs 6500 lb. and is rated as having a drawbar pull of 2500 lb.

The main frame of cast iron is in one piece. This casting also acts as the container for the transmission and also forms the frame for retaining the rear axle housing. One of the interesting features of this case is that the frame allows for carrying the bearing for the engine crankshaft and all of the main shafting. The bearings are machined at the same time, giving assurance of having the main bearings in alignment,

The front axle, being a drop forging, is pivoted at the middle and carries the

frame of the tractor through the frame extension, forming a three-point support for the frame.

The front axle is carried on steering knuckles so designed as to form the bearings for the front wheels. Steering is effected through arms extending from the knuckles through a cross-rod arm and the reach rod extending back to the steering gear. The latter is the worm and worm wheel type. Outside turning diameter of the tractor is 27 ft. 3 in. The front wheels are carried on plain bearings.

The rear axle and the transmission run on Hyatt roller bearings. The transmission spur gears are contained in a dust-proof case, the main section of which is integral with the main frame. The drive axle, 234 in. diam., is of the live type. That is to say the shaft passes through the frame. On one side the drive wheel is allowed to revolve on the shaft, while on the other side, the shaft turns with the rear wheel, being driven through a casting so designed that its tongue fits into the grooves of the rear wheel hub

The drawbar clearance is 14 in.

The drive wheel, 52 in. in diam., with a 12-in. face, and the front wheels, with a diameter of 32 in. with a 16-in. face, are made of steel construction of the built-up type. The spokes are flat with a reinforcing section passing through the

center, being riveted to the cast iron hub at the center and with angles at the rim. The rear wheels are supplied with angle iron grouters, the latter being regularly furnished. These extend 6 in. beyond the outer edge of the tires.

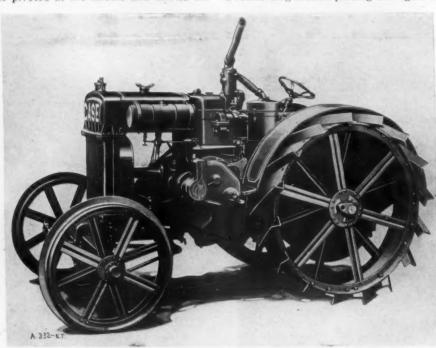
The engine is the 4-cylinder type with $4\frac{1}{2} \times 6$ -in. cylinders, cast in block. It is the vertical valve-in-the-head type with a normal speed of 900 r.p.m. The engine is designed for kerosene burning, and is placed transversely on the frame so that spur gears may be used throughout, and the belt pulley is located on the end of the crankshaft. The valve mechanism, including rocker arms, springs, stems and rods, is enclosed in a dust-proof case and lubricated by an oil spray from the crankcase. A cover plate permits easy inspection.

One of the important features of this engine is that the cylinder barrels are removable so that in case of wear or accident they may be replaced quickly and easily. The lower half of the crankcase is part of the main frame. The bearings for the crankshaft are contained in the frame casting and have the bearing caps on top. Two hand holes are provided from which the cover plates may be removed, through which adjustments to the crankshaft bearings may be made. The main bearings are bronze backed babbitt bearings, 3 in number, with a total length of 12½ in.

The governor, of the centrifugal ball type, is driven from the camshaft by helical cut steel gears, being enclosed and running in oil.

Lubrication is obtained by combination force feed and splash system. This provides lubrication for the piston, connecting rod bearings and valve rocker arms, while the crankshaft bearings, camshaft and governor are oiled by force feed from a pump of the plunger type driven through a set of spur gears. An oil indicator is in sight of the operator which shows when the pump is working, and the system is also equipped with a float, which is in sight of the operator and shows the height of the oil in the reservoir.

The clutch is of the expanding type, the spider having a splined hub and the shoes being faced with asbestos friction fabric. The clutch is located in the belt pulley and is operated by means of a hand lever near the operator's seat, one clutch being used for both traction and belt work. The clutch pulley is also provided with a brake which is operated by the clutch lever. This brake is used to hold the pulley when the gears are being



View of Left Side of the New Case 15-27 Tractor

changed. When the gears are in mesh it is also used as a brake for the tractor.

Ignition is by high tension Kingston magneto with an impulse starter. Carburetion is provided through a Kingston 1½-in. carburetor, fuel being fed to the latter by gravity. The tractor is equipped with two tanks, the gasoline tank with 2¾-gal. capacity and the kerosene tank with 20-gal. capacity.

The air cleaner used on this tractor is of the Case make and is of the washer type, the incoming air being drawn through water.

The cooling water is circulated by centrifugal type pump. The radiator is of the tube and fin type, with cast iron frame. The fan is gear driven and is provided with a friction safety hub, allowing the fan to gain its normal speed gradually, thus relieving the strain on the fan gears. The fan shaft is equipped with New Departure ball bearings. The cooling water is kept at constant temperature by means of a thermostat.

The transmission is of the spur gear, sliding gear type, being enclosed and running in oil. The gears are of high carbon steel with cut teeth, and are heat treated. The high gear ratio is 40:1, the low being 62:1. The counter shaft diameter is 2 15-16 in., the intermediate shaft is 2 35-64 in. The crankshaft pinion is made of steel forging and meshes into a semi-steel first reduction gear, the latter being keyed to the first shaft in the transmission. This shaft runs on Hvatt roller bearings and is provided with six splines which drive the two speed changing gears. The transmission is equipped with Hyatt roller bearings throughout. The bull pinion and master gear are steel torgings; both of these have cut teeth and run in oil in a dust-

The differential is of the bevel pinion type, having four pinions, the latter being made of cast steel thoroughly enclosed and running in oil. The differential is carried on the rear axle and runs in Hyatt roller bearings.

The belt pulley, 16 in. diam. with a 6½-in. face, with a normal speed of 900 r.p.m., is connected direct to the crankshaft. The belt pulley is conveniently located on the same side as the steering wheel so that the operator can see it from the seat when lining up to a machine.

General Motors to Build Tractor

A new tractor which is designed to compete with the Fordson, and will sell for \$650, is being planned by General Motors. The tractor will be known as the Samson and will be a two or three-plow machine, designed to pull two plows under all conditions and three plows under favorable conditions.

Production of the new tractor is to be carried on in the Janesville, Wis., plant of the company.

The Necessity for Trained Motor Truck Operators Becomes More Apparent

Owners Anxious to Secure Good Men. Dealers Are Training Men in Anticipation of the Future Demands of the User

By C. P. SHATTUCK

THEN in New Haven, Conn., recently my attention was directed to the use of a fleet of ten trucks in the service of a wholesale grocery house, Miner, Read & Tullock, established since 1856. I was informed that this concern adopted motor trucks as far back as 1913, and was utilizing them for delivering food products in the western part of the State, and supplying grocers, etc., in Hartford, New Britain, Meriden, Danbury, Waterbury, Middletown, Bridgeport, etc., as well as for hauling carloads of goods from the freight terminals to the warehouses.

Assuming that a fleet of ten machines and no horse-drawn equipment meant satisfactory service, and scenting efficiency, I sought George Tullock, a member of the firm, who also has charge of the transportation. "Yes," he said, in reply to my question as to the service of the trucks, "they were satisfactory before this shortage of trained operators arose. At present they are just about 25 per cent. as efficient as they were formerly. Yes, the trucks themselves are all right, but they are proving a mighty costly investment for us, and have for some time past.

"Aside from the cost of maintenance, due to the poor operators, I find that the tonnage and mileage is 50 per cent. of what it was a few years ago, when trucks were not as good as they are today." Mr. Tullock supplemented his statement with records showing the amount of material hauled and the time required under the present conditions and formerly, and added that the majority of the hauls at the present time are over improved roads.

Passes the Buck

"It isn't a question of wages," continued Mr. Tullock. "We pay our men as well as those in the big cities and, I guess, better. We have no limit, within reason, as to what we will pay a real, honest-to-goodness operator, but we simply can't get them. The few we had left for the munitions plants, and those we have tried out since—oh, well, the less said, the better.

"What is the solution of the problem? Why, that is up to the makers and agents of the trucks. They should at least take some steps to develop and train motor-truck operators. The owner is not qualified to do this. And, furthermore, there is a growing need for mechanics in our garages. We can't get them, and there

are many others in a similar position. If we are to continue to use trucks and buy more trucks, we have got to eliminate the half-trained operator, as he means decreased efficiency and increased operating and maintenance costs.

What Some Drivers Do

"There's a future for an operator with us and should be for him in many other other lines of business similar to ours as well. We supply a large number of stores and it requires a little tact upon the part of our men to handle the customers. Many times a man will drive up to a store with an order, and find the proprietor with a grouch on. Here's what frequently happens:

"'Where do you want 'em?' says the

"'What—all those goods for me? Never ordered so many. Must be padding my order. Can't never sell them,' and so on.

"'Take or leave 'em. Nothing in my young life.'

"About that time," continued Mr. Tullock, "a customer will come in. Does the operator wait until the proprietor is through with his customer? Does the operator use any tact or diplomacy? He does not. He 'butts' in on the sale and gets called down for it, and is probably told to get out, which he does, taking the goods back to us. It means that the customer has to be pacified, a loss of time on our part, and the extra hauling and handling of the goods.

Value of Courtesy

"Here's a specific case of lack of brains on the operator's part. This customer returned two cases of goods which are now hard to obtain and which will rise in price. If, instead of antagonizing the storekeeper, he had explained that the goods was a good buy, that they would be scarce very shortly, the customer would have kept them."

"But wouldn't your plan result in making a salesman of the truck driver?" I asked.

"It does to a certain extent; and why not? There is no reason why a truck driver in our business should not graduate from the car to the salesmen's force. He has the best chance in the world to get acquainted with the trade, to make use of the salesman's best asset—personal contact with the prospect. With a little application he could learn our business. But it's going to take a decidedly higher class of men than we get at present." Mr. Tullock went on

to say that he endorsed the suggestion in the November issue of the Commercial Car Journal, that steps be taken to develop a new class of operators, and hoped that it would be given serious consideration by the dealers or some other body capable of training raw material and not trying to reconstruct the inefficient type of operator, "which is a hopeless case," he said.

New York Dealers Start Schools

That some of the New York dealers, distributors and factory branches are anticipating the future requirements of the users of trucks is manifest by the steps taken to train men. The Packard Motor Car Co., of New York, is mailing users of Packard trucks a very neat eight-page illustrated brochure outlining its plan for training the operators of Packard trucks. Under the heading, "A Shortage of Trained Drivers," are the following interesting and pertinent facts:

Truck owners face a serious shortage of drivers. Thousands of America's best truck operators are in the army and their services will doubtless be among the last to be dispensed with when demobilization begins. Industrial America has had to get along with the comparatively few skilled drivers not called to the colors, and fill the gaps by breaking in new men. Unfortunately many of the new men know very little about the truck they operate, whereas no man can know too much about such an important thing. The half trained operator means a loss of efficiency, increased depreciation and higher cost of maintenance. The driver who thoroughly understands his truck is an untold asset alike to his employer and to the builders of the trucks he drives.

Tuition Free of Charge

The Packard Motor Car Co., of New York, is giving concentrated Packard instruction and there is no charge. The course consists of five indoor lessons, Monday to Friday evenings, inclusive, at the New York City branch, and outdoor instruction from the Long Island service station. The indoor course, which is open to owners as well, consists of the fundamental principles underlying the construction and operation of the components of the chassis. The outdoor course includes teaching rules of the road, driving in congested and ordinary traffic, how to operate the truck at loading platforms, etc. Instruction is not limited, it being the policy to complete the education of the driver.

T. H. Smith, manager of the transportation engineering department of the company, said that the school started by his concern was the best reply he could make as to the suggestion of the Commercial Car Journal, that steps be taken to train drivers. He was heartily in favor of developing a high-grade class of operators, and believed that it was but anticipating future requirements.

W. H. Moore, manager of the New York branch of the Garford Company, said he was in favor of any movement tending to improve the quality of truck operators. "Fifty per cent. of our troubles are caused by the inefficient, careless driver," he said. R. Rappaport, superintendent of service of the company, said that some effort should be made to educate the owner as well. "One of the chief faults of the owner," he said, "the man buying his first truck, is to hire an 'experienced' man. If the driver happens to be of the inefficient kind, he passes his bad faults along to the next man hired, as the owner allows the first driver to do the teaching."

Operators Are Not Interested

Mr. Rappaport went on to say that he did not believe results would be obtained by trying to teach the "experienced" or "wise guy"—that his experience has been that they will come to the first meeting (if cigars are passed around), but they will not attend the second. When asked for the reasons, Mr. Rappaport said they take the attitude that they know it all when it comes to handling trucks. The better method would be, he said, to train raw material. "And when you train a man—get a real good operator—someone comes along and offers him bigger money."

Republic Starts School

Gale V. Smith, vice-president of the W. J. B. Motor Truck Co., Inc., distributors for the Republic trucks in New York and vicinity, has begun an intensive campaign to improve and train truck operators. He sent out letters to owners, asking them to be present at a meeting and to bring their men with them. About fifty were present at the first meeting, at which Service Manager J. C. Rappleyea talked on the general care of the truck.

Weekly meetings are being held on Monday evenings, and among the subjects to be discussed are loading, unloading, routing, traffic, tires, mechanics, etc. Experts from the Republic factory are to address the drivers and owners, and arrangements are being made to have representatives of makers of carburetors, magnetos, engines, etc., speak. Mr. Smith is planning to bring the owner in closer touch with the operator, and to educate both to the need of efficiency in these days of reconstruction. It is probable that meetings will be held exclusively for owners, and authorities on transportation will be present and discuss subjects pertinent to the economical use of Commercial cars. Mr. Smith is having his salesmen taught mechanics, so they can locate and correct minor troubles of the customer's car.

Other dealers are becoming interested in the movement. To develop a high class of men is not an easy matter, presents many complex problems, but they can be and will be solved. If the meetings of owners serves no other useful purpose than that of getting them acquainted they will have accomplished much, for it is the exchange of ideas that is so beneficial to business men.

Post Office Department Will Use Army Trucks in Extension of Rural Parcel-Post Service

F there has been any doubt in the minds of truck manufacturers as to whether the Post Office Department would use army motor trucks in handling parcel post over rural routes, there need be no longer, for Fourth Assistant Postmaster-General James I. Blakslee has stated that he will take all the army trucks of all sizes that he can get to handle mail over the various inter-city routes. As an evidence of this, there was recently turned over to General Blakslee, for a thorough test, the following trucks:

One Dodge, AA body; one Ford, AA body; one Four Wheel Drive, A body; one Nash, A body; one Commerce, AA body; one GMC, AA body; one Packard, 3-ton capacity; one Mack, 5-ton capacity; one Class B Army truck and one Class A White truck.

The department is already planning routes for west of the Mississippi, having gotten its first complete Eastern system well under way, as described at length in the November Commercial Car Journal. California, with its fine automobile roads, will be among the first Western States to get rural parcel post, and routes taking in Los Angeles, San Bernardino, Sacramento, San Francisco and northward, are already projected. From California, the routes will be extended northward into Oregon, taking in Eugene, Salem and points on the route to Portland.

Routes are planned from San Antonio to Shreveport, via Fort Worth, Dallas and Tyler, Tex. St. Louis to Warsaw is another route of the near future.

As an indication of the varied work the parcel post trucks are doing, it is interesting to note that on a recent day in November the following four loads were carried in widely separated sections of the country:

Seven hundred and fifty-four pounds of milk, Fristoe, Mo., to Warsaw, Mo.

One thousand pounds of bread, Indianapolis to Bedford, Ind.

Three thousand nine hundred pounds of eggs, Lancaster, Pa., to New York

Three thousand one hundred pounds of mushrooms, Kennett Square, Pa., to New York City.

This made four truck loads of four different commodities at four different rates in four different parts of the country, and tells the story of motor parcel post success better than anything else could tell it.

With appropriations supplementing the original \$300,000 with which the Post Office Department installed the present routes, a wide extension of the service is planned, which will be made even more useful when the tremendous road building program now looming becomes a fact.



FIRESTONE built the first truck tires and has held leadership in this field ever since. The result is that half the truck tonnage of the country is now carried on

Firestone

Truck Tires

The Firestone Giant Truck Tire shown here gives traction that puts trucks through snow-drifts, mud-holes and all the worst road conditions winter brings.

There are many other types and sizes of Truck Tires in the complete Firestone line, including the Giant Pneumatic Cord. Consult a Firestone man. He has every type to offer.

FIRESTONE TIRE & RUBBER CO.
FIRESTONE PARK AKRON, OHIO
Branches and Dealers Everywhere

Some Additional Pointers on Winter Driving

E are in receipt of an advance copy of a booklet entitled "Motor Truck Traction," which has been compiled by the Standley Skid Chain Co., of Boone, Iowa. This booklet gives some very important information in regard to traction skidding, methods of extricating the truck from the mud holes, proper driving, etc., which should be of much value to truck users and those interested in motor-truck transportation.

Following are extracts taken from this booklet:

Poor traction results in the following: Low mileage; high gasoline consumption; excessive strain on the engine, transmission parts and differential; damage to tires; and big overhead.

These are considered as the most important. Running in low gear to get momentum for obtaining traction means a high gasoline consumption per mile. Speeding the motor results in overheating. The wear on the surface of the tires is excessive when the wheels are spinning and the truck does not move.

Side Skidding

Side skidding is often due to the application of the brakes, especially on corners. A corner should never be turned with the truck running over five miles per hour and the power should always be used. This keeps the wheels turning and tends to keep the truck in a line with the course it is taking. The brakes should be released before the front wheels are turned from the direct line of travel, and the power should be used in making the turn.

While speed tends to prevent the car from skidding sideways it places it in a critical position should it be necessary to apply the brakes, and it is much safer to sacrifice speed for safety.

It is very difficult to prevent spinning without traction devices. Often by throwing a little dry sand, straw, excelsior or an old sack under the wheels it will assist in getting started. Do not spin the wheels to get traction, as this reduces the grip of the tires on the roadbed. Do not put sticks or rocks under the tires. The wheels only throw them out and they tear large chunks out of the rubber.

Proper Method of Starting

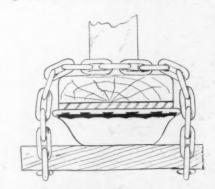
Use the low gear-in starting and only apply enough power to slowly move the truck, gaining enough momentum to keep the truck moving before shifting to the next higher gear. Do not speed the truck in either gear nor apply the power suddenly. This strains the engine and transmission and burns and wears the rubber in the tires. Better results are obtained when on slippery pavements or ice if the truck is started slowly.

Skid Chains Should be Used Properly

The minimum use of skid chains when not needed for traction means the maximum service and wear in the tires. The average driver dislikes to get out in the mud or snow and put his chains on the wheels. This may be due to the difficulty in installing non-skid chains. For this reason chains should be used that can be applied and taken off quickly and should only be used when absolutely necessary to obtain traction. Chains should not be left off until the truck is buried to the hubs, but should be installed for the purpose of carrying it through these places, and it is hardly necessary to use them except when the truck is obliged to use low speeds in pulling. Never use chains on hard roadbeds unless necessary to obtain traction. Chains are so constructed as to grip the ground and are necessary only when when they imbed themselves in the roadbed. On hard surfaces where they do not imbed themselves in the roadbed this pressure is taken up by the tires and eventually cuts into the rubber and in a short time will ruin the tires. It is much better to take the chains off when not in use, thus saving the wear on the tires and to reduce the vibration of the mechanical parts of the trucks. Time in taking them off can be quickly made up in the actual running without chains.

Getting Out of Holes

The accompanying illustration shows how a device can be made to assist in pulling a truck out of a mud hole when stuck.



A Block of Wood Anchored to the Tire Assists in Pulling the Truck Out of the Hole

providing the truck has sufficient power. When the truck is stuck to the hub the block of wood can be put across the hole and anchored to the wheel with the chains as shown in the illustration, and when the power is applied will lift itself out of the hole. This is not a skid device but only to lift the truck out in emergency cases where there is no solid bottom to the road. By connecting the spare cross chains together with figure "8" repair links, this device can be made.

In many cases only one wheel will mire in the mud. By taking the weight off this part of the truck it can be easily pulled out. This can be done by shifting the load on the truck, putting a jack under the frame, or by getting a few husky men to lift on the corner mired. It's only a waste of time to sit and spin the wheels and watch them dig deeper. A little help with a tow line often saves a lot of wasted time and hard work. Each truck should carry a tow line.

Each Government truck carries a tow chain and drivers are instructed to assist each other. This spirit should prevail between all truck drivers, as there are many opportunities to repay such favors. When a truck is mired it is difficult to get out on account of lack of power, and a little help will make it much easier.

The momentum of the truck will often carry you through a short bad stretch. Before starting through such roads put your shifting lever in low gear. To stop in a mud-hole to change gear means only to stay there indefinitely.

There is only one surety, however, of pulling through bad stretches of road. Install chains beforehand and avoid getting stuck and laboring under hard conditions to get out. This preparedness saves a great amount of lost time and hard work, and it only means a few minutes to install proper traction devices while it may mean hours to get out if they are not put on.

When stalled in a bad hole, the truck can often be reversed and backed through the tracks already made. The weight of the truck, however, often causes the wheels to settle, and for this reason we emphasize to keep the truck moving and do not stop.

In going up a hill it is good policy to start at the bottom on low gear and not attempt it on the higher gears.

Driving on Dirt Roads

Modern dirt roads are graded so to form a drainage from the center, and the sides are generally soft and contain moisture. For heavy trucks it is well to keep them in the center of the road if possible. Avoid all low and soft spots and do not get the traction wheels out of the main path of travel. Dirt roads, unless hard and solid, form a continuous hill for the truck to climb, and while these conditions are not visible, it is often necessary to resort to lower gears when pulling a heavy load. Keep the truck near the center and on the highest places. Do not drive on the side of a slanting dirt road either when dry or muddy.

Driving in Sand

Install heavy traction chains before attempting to drive through sand; use the low gear—momentum is most essential to carry the truck through sand



ROSS GEAR & TOOL COMPANY, 760 Heath St., Lafayette, Ind.

stretches. When starting in sand do so very slowly to avoid digging the wheels in.

Driving Through Snow Banks

Difficult traction in snow banks and new drifts is found principally in the resistance against the front wheels. It is necessary for the front wheels to form the opening track and instead of climbing these drifts and cutting its path, the wheels shove the snow ahead. To encounter such drifts it is often necessary to shovel a path in front of the front wheels. The rear wheels equipped with chains will take care of the traction.

Driving on Ice

On ice or slippery streets we advise careful, slow and conservative driving, with the rear wheels properly equipped with traction chains. Sacrifice speed for safety and economy.

Descending Hills

On steep hills it is often dangerous to depend on brakes. Trucks are practically all equipped with a foot brake and an emergency hand brake. For a third auxiliary brake use the compression in the motor. Leave the transmission in low gear and turn off the ignition. This holds the truck and also tends to cool the engine. Use the hand brake and foot brake alternately, releasing one and applying the other. This prevents burning out the brake bands by heating. Good brakes in stopping are as important as a good engine in starting.

Forty Thousand Aircraft AC Spark Plugs a Day. The Champion Ignition Co., Flint, Mich., maker of AC spark plugs, had reached a production of 40,000 aircraft spark plugs a day at the time of the signing of the armistice. This company supplied plugs to manufacturers of Liberty and Hispano-Suiza aircraft motors, besides producing a large quantity for shipment overseas and to the different training camps.

Splitdorf Explains Magneto Situation

In view of numerous conflicting reports which have appeared from time to time regarding the license granted under certain Bosch patents to the Splitdorf Electrical Co., of Newark, N. J., by the Federal Trade Commission, the Splitdorf company has issued a statement explaining the situation.

Splitdorf Electrical Co. was ordered by the Secretary of War to make use of two United States patents owned by Robert Bosch, of Stuttgart, Germany, in connection with the manufacture of magnetos for airplane engines. C. W. Curtiss, general manager of the Splitdorf Co., stated that the patents do not relate in the remotest degree to the principle of construction embodied in the Dixie magneto which is made under United States and foreign patents owned or operated under by the Splitdorf Electrical Co. only.

The Bosch patent 1030817 related to a binding post for connecting electric cables. By incorporating this detail in the Dixie magneto that magneto would be interchangeable with foreign magnetos in which this binding post is frequently used.

Patent 1014824 relates to an ignition system, wherein a high tension starting magneto is connected to the main magneto in such a way that the starting magneto may be operated by hand in order to furnish a starting spark. This arrangement is standard on many foreign airplane engines.

Automobile Sales Co., Memphis, Tenn., has recently closed a contract for the distribution of Cleveland tractors in that

E. K. Leech has been appointed general manager of the Morton W. Smith Co., Inc., New York City, distributor of Federal trucks. He was formerly connected with the Chilton publications.



sas City, Mo., which has recently added Diamond W trailers to the line of commercial vehicles which it manufactures, has added several new members to its executive force.

H. M. Gillespie has been appointed assistant to the president and director of sales. He was until recently a district sales manager for the Republic Motor Truck Co.

H. B. Fluerity has been made chief engineer. Mr. Fluerity has for a number of years been identified with commercial steel interests in the Pittsburgh and Birmingham sections,

Peter Nelson, formerly in charge of body building departments for the Packard Motor Car Co., Nash Motors Co. and General Motors Co., will have charge of the body building department of the company.

Ford Will Publish Weekly

Henry Ford has bought the Dearborn Independent and will divide his time between the publication of this weekly and the management of the Fordson tractor plant at Dearborn. Mr. Ford has bought the newspaper and expects to give a great deal of his time to the publication of this national weekly.

Selden Elects Officers

At the annual meeting of the stockholders of the Selden Truck Sales Co., of Rochester, N. Y., held recently, the following officers and directors were elected: George C. Gordon, president; Wm. C. Barry, R. H. Salmons, H. T. Boulden and W. F. Reynolds, vice-presidents; E. B. Osborn, secretary, and F. J. Kolb, treasurer. In addition to the officers mentioned above, H. G. Strong and C. H. Stearns, both of Rochester, were elected directors of the company.

Grain Thresher Delivered by Truck

A 20 x 28 Case steel thresher, sold from the Case branch at Oshkosh, Wis., to the Brandt Auto and Implement Co., of Seymour, Wis., was hauled the 40 miles between the two towns on a Clydesdale truck without a single mishap. The thresher was equipped with feeder, grain handler and windstacker, which added somewhat to the bulk of the load. The four steel wheels were removed and the machine rested on the axles, which allowed it to be blocked to the deck of the truck.

The motor truck is doing much to save time for the agricultural dealer during his short and busy delivery period.

Liberty Carburetor Co., Detroit, Mich., has been organized by Jere McCarthy, president of the McCarthy Motor Sales Co., Ford distributor. The company will manufacture a carburetor known as the Liberty, for use on Ford cars.



Sheep Queen Owns an Atterbury

Mrs. L. L. Moore, of Lucerne, Wyoming, known as the Sheep Queen of Wyoming, has found a two-ton Atterbury truck a useful asset in her business

ONEIDA MOTOR TRUCK CO. of GREEN BAY, WIS. Have Standardized on

Smith Wheels

THE REASON

Oneida Trucks, equipped with Smith Wheels, sold easier and staid better sold with the Truck User.



Leading Truck makers are Standardizing on Smith Wheels for their 2-ton, 3½-ton and 5-ton models—some for ton and ton-and-a-half.

WISDOM, JUDGMENT AND SOUND BUSINESS ECONOMY DEMAND SMITH WHEELS—ALWAYS!

Smith Wheels give much greater Tire Mileage Smith Wheels increase Gasoline Mileage Smith Wheels lengthen Truck Life

Smith Wheels never give out!

Standardization on Smith Wheels previously announced: Federal, G. M. C., Gramm-Bernstein, Moreland, Republic, Riker.

Just watch our Family grow!

When each wood wheel fails, have the Truck Dealer or Agent from whom you bought your truck order Smith Wheels to make the replacement with. We endeavor to carry a complete stock of Smith Wheels for different sizes of tires, makes and capacities of axles, so that immediate shipment can be made.

SMITH WHEELS

Northern Ohio Farmers Make Record During Past Summer in Shipping Farm Products by Motor Truck Express

Highways Motor Transport Company, of Cleveland, Carries Fruit and Garden Truck to Market, and Gives Farmers a Service They Are Very Enthusiastic Over Plan Far Greater Shipments Next Year With Increased Yield

By A. V. COMINGS

URING the past summer the Highways Motor Transport Company, of Cleveland, made a record in transporting fruit and other farm produce which should prove of value to those interested in the amount of time he can give to Highthe possibilities of this method of hauling from farm to city. Other transportation work, carried on by the company at the same time, is also of peculiar interest, for this company was organized only last spring, and much of the work was accomplished with no precedent to serve as a guide.

Much of the detail of organization of this company, with its merchandise rates, territory covered, etc., was given in the May issue of the COMMERCIAL CAR JOUR-NAL, and will not be repeated here. The company started with six motor trucks, all six-ton Packards. Under the efficient and energetic management of C. S. Richardson, its president and general manager, business has grown steadily, and today ten Packards of six-ton capacity are in use, and four more will be delivered shortly. Two five-ton Troy trailers are also used. From Cleveland, these trucks run east and west from Ashtabula to Sandusky, with many special trips beyond these points, and to other cities south of the Cleveland district.

In the spring, a large business was developed in handling hot-house lettuce and tomatoes from Geneva and Ashtabula to Cleveland, this business running from one-fourth to an entire truck load per day, according to the supply. It was sold through commission houses to Cleveland hotels.

Later, when the small fruits began to ripen, the trucks were again called on for transportation, and nearly 20,000 crates of berries and 25,000 bushels of tomatoes were delivered from the field to Cleveland markets. These were followed by 20,000 bushels of apples, peaches, beans, etc., of which about one-third went to the open market and the remainder to canneries. In practically all cases delivery was made on order from buyers who had previously traveled through the country making contracts for the fruit

Trailers Assist in Hauling Peak Loads

The big haul came in the grape season, however, when the motor trucks transported 84,000 baskets of grapes to Cleveland, 80 per cent. of which went to the wine presses, the other 20 per cent. to market. With 700 baskets to the load,

it will be seen that there were 120 truck loads of grapes alone.

The average haul on these grapes was 37½ miles, and the charge was approximately \$7 per ton, with seven-ton loads. On the return trips between 1300 and 1800 empty baskets could be taken back to the growers, a return charge of two cents being made for each one. The average round trip of each truck on this work brought in \$77. The Troy trailers were used whenever possible throughout the summer on big loads, and proved big money makers, especially where they could be left for loading while the truck went off on other work.

A typical truck and trailer train of the mid-summer season, showing the variety of work done by this company, landed in Cleveland—the truck carrying 291 bushels of tomatoes, 9 bushels of cucumbers, 80 baskets of peaches, 13 cans of cottage cheese and six electric sewing machines, the latter being returned to the Red Cross after long use. On the trailer were 230 bushels of tomatoes.

Out of all the thousands of baskets of fruit, etc., shipped over this route last summer, not a single basket was damaged or broken open, and the farmers could hardly realize that this was possible until they saw it in the actual dollars they received for their fruits. They had been used to rail handling, which usually means considerable loss of this character of goods. They are strong for the motor truck handling, and will use it in far greater measure next summer.

Rates charged by the Highways Company for hauling fruits and vegetables, were as follows, the figures showing the distances, charge per hundredweight, and charge by the basket, together with the charge for returning baskets:

City	Distance Miles	Per Cwt.	18-lb. Basket	25-lb. Basket	Bushel Bas- ket, 60 lb.	Bush. Crate 70-1b.
Painesville	28	25c	6c	7c	18c	21c
Perry	32	30c	6c	7c	18c	21c
Madison	34	35c	7c	9c	21c	25c
Unionville	36	35c	7c	9e	21c	25c
Geneva	38	371/2C	7c	10c	23c	26c
Saybrook	44	40c	7c	10c	24c	28c
Ashtabula	55	40c	7c	10c	24c	28c
Return emp			2c	2c	3c	31/2 C

For winter business from the farms along the routes there will be a steady flow of vegetables from the root cellars, which are being piled high with mangoes, cabbages, apples, onions, etc., the farmers having stored more of these than

ever before, knowing that they may ship whenever the market is good during the winter on the motor truck express line. Vegetables of this sort should not be left standing on electric or steam road platforms, waiting for trains in freezing weather. When the trucks come along they can be loaded in a hurry, and hustled to market without injury. The Highways Company will use a double tarpaulin over roads of this character this winter, and, save in the most extreme weather, this should suffice to keep the loads from injury.

If necessary, the trucks handling this trade will be fitted with exhaust heaters to warm up the loads.

Pirates Not Extensively Patronized

Manager Richardson states that there has been considerable "pirating" over the Highways Transport routes this past summer, but that the farmers and business men who patronize the regular trucks have pretty generally found out that it does not pay to patronize the "one timer" who comes in with a cut rate just to get the business. They are supporting the regular truck line day in and day out, knowing that it is to their interest to do so.

That next summer's business, now that the farmers and merchants are more thoroughly educated to what the line may do for them, will exceed this year's business by many tons, is the belief of Manager Richardson. He is planning extensions of his present routes to other cities, and will maintain the same service in each instance that he does over present routes.

One of the best indications of the growing use of the motor truck lines is the constantly increasing "order" business for manufacturing concerns outside of Cleveland. These furnish the Highways Transport office with long lists of orders placed by them with Cleveland concerns, to be shipped "via Highways Transport," and the trucks of the latter company then go around and gather up these shipments and deliver them to the consignees. This brings quick delivery of material, etc., which might otherwise be delayed for days or even weeks by rail shipment.

The business of the Highways Motor Transport Co. has been built up so carefully, so logically, and by such business-like methods, that it may well serve as a model to any company desiring to start a motor truck express service from any of our medium sized or larger cities throughout the United States.



Why only six Atterbury dealerships are now open

URING the war we took care of Atterbury dealers.
Therefore, they are now, more than ever, happy members of the Atterbury family.

To take care of them now that Peace has come—will require even greater production. Therefore—on November 15, 1918, we began a building program which will give us our needed increase in facilities.

The Atterbury dealer's peace-time prosperity is causing our peace-time progress. But even with slightly greater production, we could not take care of more than six additional dealers.

We will gladly tell you about the success of the present Atterbury dealers, if you will write us.

ATTERBURY MOTOR CAR CO. Buffalo, N. Y.



ATTERBURY

Personal Items

L. E. Schumacher, who for the past eight years has been chief inspector of the Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., has been appointed works manager of the Krantz Mfg. Co., Brooklyn, N. Y., the latest subsidiary of the former com-

F. E. Pierce, formerly advertising manager of the Anderson Electric Car Co., has been appointed district manager for the Elwell-Parker Electric Co., manufacturer of industrial trucks and tractors.

Roger J. Gilmore has been elected president of the Packard Motor Car Co., of New York. He was formerly vice-president of that company.

J. K. Mahaffey has been appointed district sales manager of the Pittsburgh district by the Edison Storage Battery Co., Orange, N. J.

E. E. Gerlinger has been appointed Pacific Coast sales manager for the Tower Motor Truck Co., Greenville, Mich., with headquarters at San Francisco.

James A. Bennett has recently been appointed purchasing agent of the Connecticut Telephone & Electric Co., Meriden, Conn.

Bertram Smith, for the past three years district sales manager in the Detroit district for the Edison Storage Battery Co., of Orange, N. J., has been appointed assistant general sales manager of the company.

B. E. O'Connor has been elected president of the Permalife Storage Battery Co., and Charles B. Palmer, vice-president and general manager.

G. S. Bush, advertising manager of the Eclipse Machine Co., Elmira, N. Y., died recently.

W. T. Norton, Jr., formerly chief engineer of the manufacturing division of the Selden Truck Sales Co., of Rochester, N. Y., is now connected with the Engineering Division, Motor Transport Corps, at Washington.

Frank A. Sharpe has been appointed district manager by the Thermoid Rubber Co., Trenton, N. J., with offices in the Kresge Bldg., Detroit, Mich.

Allen Walker has joined the Guaranty Trust Co., of New York, and will have charge of its Foreign Trade Service.

A. R. Howell is now associated with the S. K. F. Administrative Co., New York City. He was formerly connected with the H. W. Johns-Manville Co.

Leonard C. McChesney, advertising manager of the Thomas A. Edison industries, East Orange, N. J., died recently.

R. R. Cook has been appointed assistant sales manager of the Lalley Electro Lighting Corp., Detroit.

H. W. Simpson, formerly inspector of aviation engines, is now assistant engineer with Henry Ford & Son, Dearborn, Mich.

Detlaff Company to Make Clutches and Control Sets Exclusively

A. J. Detlaff, of the A. J. Detlaff Co., of Detroit, announces that the company will in the future devote all of its production facilities to the manufacture of clutches and control sets.

Mr. Detlaff, who formed the Detlaff company in 1903, when speaking of the company's policy, said: "While we have built a wide variety of products for motor car manufacturers in the last fifteen years, it was natural that we should have worked to our present position, the building of clutches and control sets exclusively, for it was in this work that I first started the business."

The A. J. Detlaff Co. has been, for the past year, on a 100 per cent. war work basis, building Type B clutches and controls, Type AA clutches and Quad control sets. Special equipment for economical quantity production was added to facilitate government work, so they are well equipped to continue the manufacture of these products.



A. J. Detlaff
Of the A. J. Detlaff Company, of Detroit

Frank S. Cooke has recently been appointed advertising manager of the Denby Motor Truck Co., Detroit, Mich.

L. C. Sprague has recently been appointed assistant secretary of the Chicago Pneumatic Tool Co., with headquarters at 52 Vanderbilt Ave., New York City.

Richard A. Watson, secretary and production manager of the American Bronze Corp., Berwyn, Pa., has resigned his active duties with that company in order to carry on experimental work with several patents in which he is interested.

W. J. Kenrick, organizer of the Dearborn Truck Co., of Chicago, and former president of that company, has sold his interests in that concern and retired from the management. He is now completing plans for the manufacture of a new truck unit. He is also planning to build a motor truck in addition to the unit.

C. W. Stephens has been appointed sales manager of the Detroit Twist Drill Co., Detroit, Mich.

Charles F. Sims, for thirty years associated with the H. W. Johns-Manville Co., as manager of the Omaha office, died recently. He is succeeded by S. E. Cole.

James W. Graham, president of the C. A. S. Engineering Co., Columbus, Ohio, died recently from an attack of Spanish influenza.

Bishop White, vice-president and general manager of the American Chain Co., Inc., Bridgeport, Conn., died recently at his home of Spanish influenza.

E. L. Evans has been appointed superintendent of Plant 1, by the Bound Brook Oilless Bearing Co., Bound Brook, N. J.

Pablo Homs has been appointed assistant foreign sales manager of the Cleveland Tractor Co., Cleveland, Ohio, with offices at 44 Whitehall St., New York City.

H. M. Allison has resigned as president and general manager of the Packard Motor Car Co., of Chicago. Mr. Allison has been in charge of Packard distribution in the Chicago territory for the past twelve years.

Wm. C. Potter, chief assistant Director of Air Service under John D. Ryan, has resigned that office. He will resume his connection with the American Smelting & Refining Co., with which concern he was associated before joining the Signal Corps.

V. C. Fuller has been appointed special traveling representative of the Bearings Service Co., Detroit, Mich.

R. Stuart Beaver has been appointed southern sales representative of the Columbia Truck & Trailer Co., of Pontiac, Mich. He will establish his headquarters at Atlanta, Ga.



T. L. Hutchinson Who has been made manager of the Omaha, Neb., branch of the Bearings Service Company, of Detroit.



C. L. Hodgson

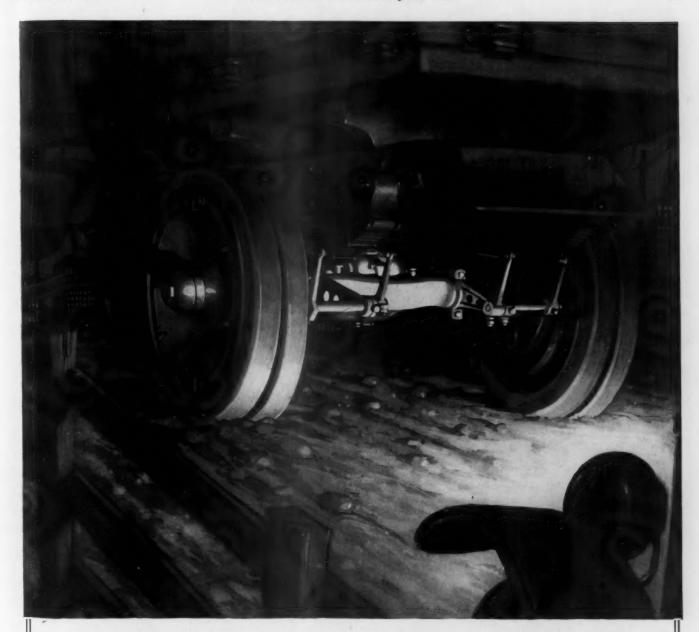
Who has been appointed central district manager of the
Bearings Service Company, with office in Chicago



Thomas O'Brien
New district sales manager of
the Bethlehem Motors Corporation, in New York and
the New England States.



H. D. Runciman
Who has been advanced to
general manager of the Hoover
Steel Ball Company, Ann
Arbor, Michigan.



Makes Light of Heavy Work

Clark Axles and Wheels are Strong



on good motor

trucks

Informative literature mailed upon request

CLARK EQUIPMENT COMPANY BUCHANAN

New Agencies

Fieet Motor Co., New York City, has recently been appointed a dealer by the Tower Motor Truck Co., Greenville, Mich.

ideal Motor Sales Co., St. Louis, Mo., will distribute trucks for the Tower Motor Truck Co., Greenville, Mich.

W. B. Bennett, Pittsburgh, Pa., has recently closed a contract for the distribution of trucks with the Tower Motor Truck Co., Greenville, Mich.

G. A. Schacht Motor Truck Co. announces the appointment of the following distributors: Chandler Motor Sales Co., San Jose, Cal.; Milnor & Horrell, Fresno, Cal.; O'Leary & Minahan, Stockton, Cal.

Ris Motor Co., Cleveland, Ohio, has recently been appointed a dealer by the Tower Motor Truck Co., Greenville, Mich.

A. Elliott Ranney Co., 244 W. 59th St., New York City, has been appointed distributor in the metropolitan district by the Columbia Truck & Trailer Co.

Cincinnati Oakland Co., Cincinnati, Ohio, has recently closed a contract with the Gramm-Bernstein Motor Truck Co., for the distribution of Gramm-Bernstein trucks in Cincinnati, parts of Ohio, Indiana and West Virginia and the state of Kentucky.

Morton W. Smith Co., 46 W. 52nd St. New York City, has been appointed distributor for New York City and the surrounding territory by the Federal Motor Truck Co.

Seth C. Earl has been appointed distributor of Acason trucks in Chicago, according to an announcement of the Acason Motor Truck Co., Detroit.

Holmes & Compton, 709 Cass Ave., St. Louis, Mo., has been appointed an agent for the Comet 14-ton truck in that vicinity.

American Machine Products Co., Detroit, Mich., has increased its capital from \$10,000 to \$40,000.

Removals and Trade Changes

Modern Pattern & Machine Co., Detroit, Mich., announces that it has removed to a new plant at 123-25 Monroe Ave., cor. Beaubien St.

E. E. Springer Co., Norfolk, Va., distributor of Federal trucks and Guaranty truck units, is now located in new salesrooms at 110-15 E. 12th St.

Dorr Miller Differential Co., with general offices in New York City, announces the removal of its factory to 138 Fort St., East Detroit, Mich.

Brisk Blast Mfg. Co., Monroe, Mich., manufacturer of automobile accessories, announces that a reorganization of the company has been effected. Its business will be conducted by a newly elected board of directors, as well as a new sales and production organization. Manufacturing facilities have been improved and production will be greatly increased.

Detroit Steering Gear Co. and the Goodspeed Detroit Mfg. Co., Ltd., have combined to form the Steering Gear Parts Co., located at 272 Harper St., Detroit. J. J. Ramsey is manager of the new company, which will manufacture a recently patented steering gear.

Liberty Starting Primer Co., 676 Wood-ward Ave., Detroit, Mich., announces that the company will be known in future as the Liberty Primer Co., Inc.

Penn Storage Battery Co., Pittsburgh, Pa., announces its removal from 5986-88 Center Ave. to 5750 Baum Blvd.

Dearborn Truck Co., Chicago, Ill., announces that it has recently purchased the good-will and all materials of the Smith Motor Truck Corp. Machinery and equipment will be removed to the Dearborn factory at 2515-25 W. 35th St. The general offices of the Dearborn company have been removed to 2015-17 S. Michigan Ave. The ground

floor of the building will be used as a showroom, and the second floor will be occupied by the sales, accounting, purchasing and advertising departments of the company.

Eclipse Valve Grinder Co., Kansas City, Mo., has removed to 1230 Lydia Ave.

C. A. Cady Co., Providence, R. I., successor to Arco Shop, announces its removal to 97 Broadway.

Mid-West Mfg. Co., maker of "Red Devil" automobile and truck service jacks, has removed its business and administrative offices to 1547 University Ave., St. Paul, Minn. Offices of the company were formerly located at Minneapolis, Minn., and Sioux Falls, S. D.

Stinson Tractor Co., Minneapolis, Minn., has taken over the plant of the Continental Motor Truck Co., at Superior, Wis. The Stinson company is installing machinery and will be making Stinson tractors there within a month.

President Favors Early Resumption of Road Work

President Wilson favors the earliest possible resumption and extension of highway construction under the Federal Aid Road Act, and has written Secretary of Agriculture Houston to that effect. The Secretary of War also has written the Secretary of Agriculture in favor of highway work.

Following is the President's letter: "Dear Mr. Secretary:

"I heartily agree with you that it would be in the public interest to resume in full measure the highway construction operations under the Federal Aid Road Act, and to do so as speedily as possible. I understand the necessity which existed for their contraction during the stress through which we have been passing, but that obstacle is now removed. I believe that it would be highly desirable to have an additional appropriation made available to the Department of Agriculture, to be used in conjunction, if possible, with any surplus State and community funds, in order that these operations may be extended. It is important not only to develop good highways throughout the country as quickly as possible, but it is also at this time especially advisable to resume and extend all such essential public works, with a view to furnishing employment for laborers who may be seeking new tasks during the period of readjustment. Knowing that the Department of Agriculture and the State highway authorities in each State have been carefully working out road systems and developing plans and specifications. I have no doubt that all activities in this field can be vigorously conducted through these two sets of existing agencies, acting in full accord.

"Faithfully yours, "WOODROW WILSON."

McCord Mfg. Co., Detroit, Mich., has recently completed an addition to its main plant. This building will be devoted largely to the production of heavy duty tubular radiators for trucks and tractors. The company estimates the production of radiators at 500 per day.



A Bus Line Near London for "Our Boys"

The best-known American around the big Roehampton Hospital (near London) is the Red Cross man, Private Maguire of El Paso, who came over to the Red Cross after serving three and a half years in the British Army, from which he was discharged for disability. The Roehampton Hospital is visited daily by hundreds of soldiers, who go there to have their artificial limbs adjusted and fitted. A special omnibus, furnished by the American Red Cross, carries the wounded to and from the hospital, which is located nearly half a mile from the nearest rapid transit line. The Red Cross man helps the soldiers on and off, and has a cheery word for every one of them.



MOTOR VEHICLES are a vital part of Transportation, multiplying man's activities and broadening his efficiency. Their present-day utility is the result of constant improvement in tire building and may be increased or decreased according to the kind of service rendered by the tires.

THE TAXICAB that takes you to the train, the passenger car, the truck with big pneumatics for the long, speedy haul and the giant solid-tired monster for heavy duty work—all of these may be made a better investment by equipping them with Fisk Tires.

For sale in 130 Branches and by Dealers Everywhere.



FISK



TIMES

See Big Future for Truck Tire Industry

By C. P. SHATTUCK

"We have made plans for doubling our production of solid tires, and production will begin immediately," said G. J. Welch, vice-president of the United States Tire Co., New York City, when asked by the COMMERCIAL CAR JOURNAL, representative for his views on the commercial car industry during the reconstruction period and future of the motor truck. "The future is the brightest it ever has been, for the war has developed the need of truck transportation."

Mr. Welch takes the same attitude as do other prominent men in the industry; that it is too early to hazard a prediction as to what effect costs of labor and material will have upon future prices, but he does not believe that there will be any reduction in the price of truck tires for some time to come. Neither would he place himself on record with a prediction of an increase in cost to the consumer, but he does believe that the tire industry will be the first to recover from the effects of the war; that the increase in demand for commercial cars will surprise even the most optimistic.

There will not be any difficulty in meeting every requirement of the consumer; whether it be pneumatics for the smaller capacity machines, the trucks employing solids or those utilizing the new large-sized pneumatics. This statement should go a long way toward reassuring those who have been influenced by pessimistic statements. The home market will first be taken care of despite the fact that the export of pneumatics for passenger cars is increasing rapidly and will continue in proportion to the decrease in the restrictions governing the use of cars abroad.

Mr. Welch is decidedly optimistic as to the future of the pneumatic truck tire, and prophesies almost universal use of the big shoes for trucks up to and in-cluding 2-ton capacity. "Practically cluding 2-ton capacity. every truck manufacturer of note is considering the pneumatic," said Mr. Welch, "despite the fact that it may mean in some instances redesigning the chassis to eliminate that weight so essential to insure stability of its components when solid tires are used. Exhaustive tests extending over a long period as well as used by consumers have proven the practicability of the pneumatic as well as its economic advantages. Use of pneumatics will mean a truck engine operating at high speeds, lighter materials, reduced operating expense and, consequently, greater efficiency."

The general use of pneumatics for heavy trucks, of 5-ton capacity, is not yet a possibility, but they will be successfully and economically utilized on the front wheels in the near future. Mr. Welch states that the development of the pneumatic for trucks has been due to the demand of the consumer. Their use will, he states, conserve rubber. They have

proven very economical in tropical countries where the heat "burns up" solid tires, and have been equally successful abroad in government service.

The United States Tire Co. has anticipated adverse tractor legislation, and its development department is experimenting with a form of solid tire that can be easily attached to the wheels of the tractor when the machine is to be used on the highways in traveling, going from one farm to another or hauling a trailer or other equipment. Details will not be made public until the tire has been through the tests required of any new product by the company.

M. T. A. of A. Appoints Committee to Handle Labor Problems

At the monthly meeting of the Motor Truck Association of America, Inc., held November 20 at the rooms of the Automobile Club of America, New York City, the members decided to organize and appoint a committee of seven to handle any matters relating to any conference; that may be necessary between the members of the association and those bodies or officials representing labor organizations. This step was taken after a member outlined conditions as they are at present and as they may be in the near future. It is proposed to give the committee that will finally be appointed full power to act for the association and its members. The movement is deemed absolutely essential by those familiar with conditions in New York, and will, it is believed, permit of amicable adjustment of problems having to do with organized labor. At the present time the unions treat with the individual.

A resolution was adopted endorsing the proposed tunnel connecting Manhattan with New Jersey. A copy is to be forwarded to Washington,

The Highways Council Removes Restrictions on Road Work

The United States Highways Council announces that no further applications need be made to it for approval of highway projects, that previous disapprovals are revoked, and that pending applications require no further action.

Procedure in securing materials and transportation should follow normal practices, officials of the council said.

The removal of restrictions does not affect highway bond issues, which are under control of the Capital Issues Committee.

State highway departments will not be asked to submit programs for next year's work.

Henry Ford & Son, Dearborn, Mich., has completed arrangements for the erection of a branch tractor plant in Adrian, Mich. Work on the plant will be started in the spring, and it is stated that it will employ about 200 men.

Dealers May Now Sell Trucks to Anyone

Under Circular No. 57 issued November 11, 1918, the Priorities Division of the War Industries Board rules as follows:

"Section 4-Dealers (wholesale and retail) in raw materials, semi-finished and finished products are hereby relieved from the obligation to give and require pledges relating to such commodities, notwithstanding any provision for pledges in any order or circular heretofore issued by the Priorities Division, and notwithstanding any stipulation in any pledge that will require pledges from those who buy from them for resale: * * * * provided, however, manufacturers will continue to give pledges in accordance with the terms of orders and circulars heretofore given save that they are hereby relieved from the provision in such pledges as require manufacturers to exact pledges from those who buy from them for re-sale."

From the above, it is indicated that manufacturers of motor trucks are not required to exact pledges from dealers or others buying trucks for re-sale.

This abolishes the subsidiary pledge required in Circular No. 11 and thus permits dealers (wholesale and retail) to sell trucks to anyone instead of being limited to the preferential list.

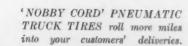
Implement Association Meets

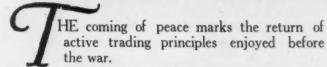
The readjustment period and its many attending problems was the theme of discussion at the annual meeting of the Tractor and Thresher Department of the National Implement and Vehicle Association, held at the Auditorium Hotel, Chicago, Nov. 21-22.

It was decided at the meeting that, no matter what action the Government would take in the matter, the eliminations program would be continued by the manufacturers, as it is highly desirable from an economic standpoint. The work of the tractor demonstration committee was reviewed, and it was resolved that the committee should continue to handle, as in the past, the tractor demonstrations for the whole country. Junius F. Cook, assistant to the Secretary of the U. S. Department of Agriculture, in charge of farm implement control, addressed the manufacturers on the subject of "Tractor Education."

A recent bulletin issued by the society regarding the prices of agricultural implements, states that present price levels for implements must continue for a considerable period. Since there is nothing to indicate a reduction of labor costs and transportation costs are no lower, it is not probable that there will be any recession in the prices of farm implements.

Puritan Machine Co., Detroit, Mich., has purchased from the American Ball Bearing Co., Cleveland, Ohio, its entire stock of parts, dies, etc., and is removing the stock to the Detroit Puritan plant.





Practical heads of big transportation companies realize the necessity of keeping merchandise moving on good, dependable equipment, ever safeguarding against congestion.

Beyond a doubt, the 'NOBBY CORD' PNEUMATIC TRUCK TIRE adds to the truck's performance by—

- -increasing the speed
- -cutting repair bills-and
- —protecting the machinery by cushioning the load. It will pay you to stock this popular heavy-duty tire.

United States Tires
Are Good Tires







How Indianapolis is Putting the Return-Loads Idea Across

By A. V. COMINGS

HOROUGHLY exasperated with the slow progress that the return loads movement was making in Indiana, and particularly in the Indianapolis district, fifty members of the Indianapolis Chamber of Commerce carried the story of return loads into every village within a radius of fifty miles of the capital on Wednesday, November 13th, and as a result the tonnage carried out by motor truck promises to show some very interesting developments in the near future.

Indianapolis, like Cincinnati, Kansas City and Omaha, has hundreds of motor trucks entering the city daily with stock for its great stock yards. Until the return loads bureau was established at the stock yards last summer by the Indianapolis Chamber of Commerce, these trucks invariably returned to the country empty, sometimes as far as fifty miles out. The establishment of the bureau at the yards, in charge of R. A. Smith helped somewhat, and many tons of return loads were furnished the various incoming trucks whenever opportunity offered.

A careful check from September 9th to September 23rd of this year showed 108 tons furnished the truckmen by the bureau, but this did not satisfy the live wires of the Chamber of Commerce.

So they set apart a day—November 13th—on which they determined to let every merchant in every town within fifty miles of Indianapolis know that he could be patriotic and also a wise business man if he would arrange to have his Indianapolis purchases sent out on these empty returning stock trucks, which would set the shipments right down in front of his door within 24

hours of the time he placed his orders. In preparation for this invasion of the country, Secretary Tom Snyder corresponded with the local business men's associations in all the smaller places, sent out large posters announcing the plan, and had meetings of merchants arranged wherever possible to be addressed by the flying squadrons of Indianapolis business men.

Publicity was given the plan in newspapers and otherwise, and as a result the Chamber of Commerce speakers found interested and enthusiastic groups waiting for them in almost every village they visited.

Central Warehouse in Indianapolis to Take Care of Outgoing Materials

In each case the plan was explained to the smaller town merchants, and booklets giving details of the plan were distributed. Almost without exception they gladly signed cards authorizing the motor truck owners from their district to haul

Tom Snyder
Secretary of the Indianapolis Chamber
of Commerce

their merchandise to them from Indianapolis on their return trips after delivering stock in the capital. Nearly 400 of these cards were signed, and on this showing the Indianapolis Chamber of Commerce has gone ahead and leased a central depot for the exclusive use of the truck men in this service.



Trucks Having Delivered Their Load to the Stockyards Are Ready for Return Hauls



Office of Return-Loads Bureau Established at the Stockyards

All country orders with Indianapolis jobbers, merchants, etc., on which motor truck shipment is specified, will be delivered to this central warehouse, and the returning trucks will call there each morning and carry out to the merchants along their routes the merchandise that heretofore has taken up valuable room in steam and electric cars. This will release many freight cars for long hauls, and will give the merchants along the various routes much quicker service than they have had heretofore.

The eleven routes covered by the Indianapolis business men were as follows:
Route No. 1—Lawrence, McCordsville,
Portville, Pendleton, Anderson and Alexandria

Route No. 2—Allisonville, Fishers Station, Noblesville, Cicero, Arcadia, Atlanta and Tipton.

GUARANTY PLAN BANKING

EVERY progressive truck dealer maintains two banking connections.

One of these is properly with his local bank for current deposits and expenses.

The other should be with the strongest banking institution specializing in the discount of automobile paper.

A connection with such an institution gives the dealer a certainty of being able to finance his receivables irrespective of local money-market conditions.

Continental Guaranty Corporation, known until April 15th as Guaranty Securities Corporation, has the largest resources of any banking institution in the world devoting its exclusive attention to automobile financing.

Resources of \$12,000,000, a strong organization, a clean-cut, four-square policy, and an abiding faith in the automobile industry have put the institution in the foremost place.

We solicit inquiries from responsible, well-rated merchants of trucks, who would like to discuss the matter of opening an account with us. Your inquiry places you under no obligation.

Continental Guaranty Corporation

Continental Guaranty Building

New York City

San Francisco

Montreal

Affiliated with Guaranty Banking Corporation
Continental and Commercial Bank Building, Chicago, Illinois

92,975 trucks and automobiles (worth over \$75,000,000) financed up to March 30, 1918



Route No. 3-Zionsville, Whitestown, Lebanon, Hazlerigg, Thornton, Colfax, Manson, Frankfort, Kirklin and Sheridan.

Route No. 4—Clermount, Brownsburg, Pittsboro, Jamestown, New Ross, Crawfordsville, Ladoga, Roachdale, Bainbridge, Danville and Avon.

Route No. 5—Ben Davis, Plainfield, Cartersburg, Clayton, Amo, Coatesville, Greencastle, Cloverdale, Emminence, Hall and Monrovia,

Route No. 6-Mooresville, Brooklyn, Martinsville, Morgantown, Trafalgar and Bargersville.

Route No. 7-Southport, Greenwood, Whiteland, Franklin, Edinburg and Columbus.

Route No. 8—Acton, Fairland, Beggstown, Shelbyville, Walron, St. Paul, Adams and Greenburg.

Route No. 9—Julietta, New Palestine, Fountaintown, Morristown, Arlington, Rushville, Henderson and Carthage.

Route No. 10—Broadripple, Nora, Carmel, Westfield, Goldsmith and Kempton.

Route No. 11—New Philadelphia, Greenfield, Cleveland, Charlottesville, Knightstown, Dunreith, Lewisville, Dublin and Cambridge City.

A careful route sheet was kept by each party, showing the condition of the roads over which it traveled and the amount of good paving, etc. These sheets were forwarded to the Highways Transport Committee at Washington for its records.

United Motors Service Corp., Detroit, is preparing to open branches in different parts of the country. A tract of land has been purchased in Detroit, adjoining the property of the Hyatt Roller Bearing Company.

Official Report on Tractor Production in United States

The Office of Farm Equipment Control of the United States Department of Agriculture recently completed an investigation of the tractor situation in this country. It was desired to obtain accurate information regarding the status of the farm tractor industry in order to determine what action would be necessary to facilitate an adequate and equitable distribution of tractors throughout the country. A report from every tractor manufacturer in the country was received in connection with this investigation. These reports contained statements of the number of tractors manufactured and their distribution between January 1, 1916, and July 1, 1918.

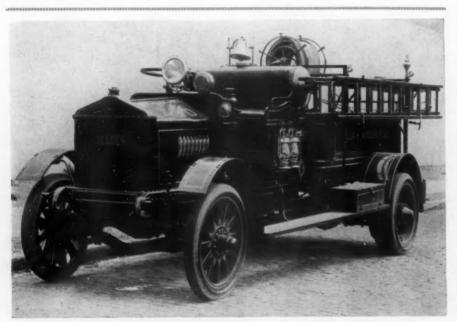
Following is a summary of these re-

	Number					of Ti				ractors						Manufactured									ired			
191	3			,	*		×																					29,670
191	7																											62,742
Ian	ua	ır	v		1	t	o		1	ī	11	1	e		3	0.		1	9	1	8							58,543

Total	for	1916,	1917	and	first	half	
of	1918					1	150,955

Number of Tractors Sold To Users.

1916	27,819
1917	49,504
To Exporters.	
1917	14,854
1918, first 6 months	15,610
Number of tractors in hand, in	
transit, or in hands of dealers	
at time of Report (August,	
1918)	11,388



Selden Fire Truck Aids in Fighting Fire at Big Shell Plant

This truck was furnished to the town of South Amboy, N. J., by the Selden Truck Sales Company, of Rochester, N. Y., just prior to the big fire at the shell-loading plant of the T. A. Gillespie Loading Company. Records furnished by the town of South Amboy to the Selden Company showed that the pumping outfit operated by the motor of the Model NL three and a half ton Selden truck, started at 8 a. m. on the morning of the big fire and explosion, and worked constantly until 8 o'clock the following night, and during that time never stopped for a second, pumping as high as five hundred and fifty gallons of water per minute. As a result of this wonderful showing the T. A. Gillespie Company ordered out three additional Selden fire trucks to guard its own plant, and the town of Fords, N. J., located in the burned district, placed a duplicate order.

Bellem Kerosene Pulverizer Wins Contest in France

The Bellem kerosene pulverizer won both first and second prizes in a contest organized by the Automobile Club of France to encourage the use of kerosene in automobile engines.

The engine started on kerosene and did not use gasoline at all, although the rules permitted starting on gasoline if necessary. The time required to get the engine running properly varied from 4 seconds to 45 seconds.

Only devices constructed entirely in France were eligible, and there were originally six competitors, but only four completed the tests. Two of the motors presented were made by the Bellem company, one by the Aldo company and one by the Renault company.

Both bench tests and road tests were given the engines, and good results were obtained in both.

The Bellem device is made up of two parts, one of which provides for the distribution of the kerosene to the cylinders in the right proportion, and a pulverizing apparatus, fitted in the cylinder head in place of the priming cups. It is manufactured by Bellem & Bregeras.

Highway Traffic Association Widens Field of Operation

At the annual meeting of the Highway Traffic Association of the State of New York steps were taken to widen the scope of the association, making it a national organization with representatives delegated by the various States.

At a conference held November 11 the subject of snow removal from trunk highways was discussed by representatives from the North Atlantic and North Central States and from Canada.

Officers of the association were reelected as follows: William P. Eno, honorary president; Arthur H. Blanchard, president; David Beecroft, vice-president; Elmer Thompson, secretary, and George H. Pride, treasurer.

Tax on Gasoline Removed

In its revision of the War Revenue Bill, the Senate Finance Committee voted on November 22 to eliminate the proposed tax on gasoline. This tax provided for the payment of 2 cents a wine gallon upon all gasoline, naphtha, and other similar petroleum products, having a flash point below 100 deg. Fahr., as tested by the Taglibue open-cup tester, and suitable for motor power, sold by the manufacturer, refiner or importer.

Northwestern Chemical Co., Milwaukee, Wis., is planning to erect a new plant at a cost of \$35,000. The building will be 50 x 150 ft., and of fireproof construction. This company lost its plant at Wauwatosa by fire in September.

Sewell Cushion Wheels

DON'T BLAME THE TRUCK - EQUIP WITH SEWELL WHEELS

The SEWELL-EQUIPPED Truck Keeps Out of the Repair Shop

Ordinarily, when you sell a truck your troubles are only beginning. Time after time it comes back to you for minor repairs or adjustments. And each time the owner expects you to make it right without charge. A just bill brings a storm of protest. To save trouble you compromise. And away goes part of the profit on the sale of the truck. Let it come back often enough and you have nothing left for your efforts.

How fine it would be to sell trucks that keep out of the repair shop!

Well, there's a way to do it if the trucks you handle are good ones. Sell them equipped with Sewell Cushion Wheels. They will keep a well built truck out of the repair shop. Here's the reason. They are built with a protected rubber cushion inside, which absorbs the vibration before it is transmitted to the motor and other vital parts. It is this destructive vibration that causes troubles which send the truck to the repair shop. Sewells prevent these troubles and thereby save your profits by eliminating free service and bill adjustments.

Thousands of owners use Sewell Wheels because they save trouble, lengthen truck life and de-

crease maintenance costs. Hundreds of truck dealers recommend Sewell Wheels because they save their profits from being used up in free service. You are helping yourself and your trade by telling them about Sewells.

Branches:
Baltimore, Md.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cincinnati, Ohio
Columbus, Ohio
Dallas, Texas
Detroit, Mich.
Indianapolis, Ind
Jacksonville, Fla.
Kansas City, Mo.
Los Angeles, Cal.



Sewell Cushion Wheel Company
Main Office and Factory: Detroit, Michigan

Branches:
Louisville, Ky.
Milwaukee, Wis.
Minneapolis, Minn.
Newark, N. J.
New Orleans, La.
New York, N. Y.
Philadelphia, Pa.
Pittaburgh, Pa.
Rochester, N. Y.
San Francisco, Cal.
Seattle, Wash.
Springfield, Mass.
St. Louis, Mo.

Retailing Truck Tires Through Dealers

By M. SMOLENS, Manager Sales Development, Polack Tyre & Rubber Company

T may be correctly said that what has in the past, more than anything else, kept truck tire sales from being more generally taken up by the dealer, is the service feature essentially connected with truck tires, that is, the applying of the tires to the wheels.

The universal method of applying truck tires, even in the smallest localities, is the hydraulic press. While there are a large number of tire presses scattered today throughout the country in the hands of dealers, in both large cities and small towns, the fact that many dealers who do not own tire presses have become large factors in truck tire sales, shows that the service feature in truck tire sales in the past, instead of being the primary obstacle in itself, was rather a contributing difficulty brought on by other underlying conditions, existing in the truck tire industry. Obviously, therefore, if these underlying conditions in the industry have been either rectified or eliminated, it follows that the obstacle of the service feature has been overcome.

Chief among these past conditions was the number of trucks in use. While the number of trucks in use was limited, confined principally to the larger cities or to certain industrial sections and their number scattered, only the larger cities could find sufficient work for a tire press.

Now, on the other hand, with the tremendous increase in the use of trucks, both in number and in character, in agricultural as well as in industrial communities, in city as well as in intercity use, the matter of a tire press becomes trifling by comparison with the results to be derived from so large and general a demand.

Again, lack of, or, in any event, insufficient standardization is another factor which operated in the past against the proper development of truck tire sales through dealers. Although the S. A. E. standard wheel was adopted a number of years ago by truck manufacturers, it is only now that the real fruits of standardization are realized. The more recent standardization of the method of applying the tire direct to the permanent wheel band is now complete with the adoption of only a handful of sizes to be used in future.

Another outstanding factor in the old conditions which placed the service feature of truck tire sales at a disadvantage was the experimental stage through which the truck tire product was passing, as in the case with the first years of the pneumatic tire or the automobile.

During the past two or three years particularly, the truck tire product has been standardized and stabilized, but prior to

that truck tires as a whole were an uncertain, and at times, a very unsatisfactory product, involving adjustments and various other exacting demands that naturally arise in a condition of that kind, so that the service feature had the effect of nullifying the profit and prestige in the sale of the truck tire.

Today, on the other hand, truck tires as a whole are good tires, giving general satisfaction, and requiring comparatively few adjustments or other special features of service, so that the service feature is almost a routine, perfunctory procedure.

Thus, instead of a series of unfavorable conditions in the truck tire industry making of the service feature a needless obstacle, we find today in every direction in the truck tire business great strides that make the service feature an ordinary detail.

Today with the large demand and constantly widening market for truck tires, with standardization in truck tires to the smallest detail, with the improved quality of the truck tire product, the chief obstacle of the past may be said to have been removed. The matter of a tire press, where the dealer takes on the sale of truck tires on the basis of giving his own service, is no more of an item than the installing of the usual fixtures in a store, or the adding of an item of machinery for the improvement of a business, that soon pays for itself.

But the dealer maintaining his own press, is no longer the only source for the distribution of truck tires. As in the case of the pneumatic tire, the automobile, or the accessory, the field for truck tires has now reached such dimensions that the subdealer performs a very essential function even where he takes on the sale of truck tires without the maintaining of his own service facilities, merely by arranging for his service with an outside concern who already maintains a tire press. In many such cases it is found the outside concern having such facilities is only too glad to arrange with other dealers taking on truck tire sales without maintaining service, to furnish the service to them at a stipulated charge, thus increasing the profits of its service station.

With the rapidly increasing number of trucks in use in all communities, it is now found that the demand for truck tires soon becomes so great that even in a small town, where there may be two or three dealers equipped with tire presses, these dealers soon find it desirable to supplement their existing line of truck tires with still another. And with the continued expansion of truck use, which is

about to receive even greater impetus than at any time yet, not only will the number of truck tire dealers having tire presses increase, but the dealer without one will play a more conspicuous part in truck tire sales, in the same position that the subdealer in pneumatic tires or automobiles occupies in relation to his distributor.

Since its inception the whole development and growth of the automobile industry has in no little measure been a series of applications of merchandising principles, drafted from other and older lines of business. A pertinent parallel may be drawn between the hardware and the truck tire business. In a given community a hardware jobbing house is found to maintain a warehouse with a complete stock, service equipment, etc. The small hardware concern in the same community, which it supplies, may have a call for some hardware equipment or machinery, which it is not equipped to carry, but by sending the customer to the jobbing hardware house the order is supplied or the service rendered for the account of the retail merchant.

In the same community the branch of the truck tire manufacturer or territorial distributor is in no different position than that of the hardware jobber, and in fact, he may be the truck tire distributor. If the retail dealer maintains his own service facilities, he is independent of the branch distributor, except for the receiving of his supplies.

If the retail dealer does not maintain his service facilities, but merely carries a limited stock, he takes care of his orders by looking to his distributor for service in the applying of the tires.

In the early days of the pneumatic tire, when the owners of automobiles grew to such large numbers that the tire branch or distributor found itself inadequate to care for all the business, the tire dealer, automobile dealer, accessory dealer and garage, solved the distribution problem.

The rapidly growing number of trucks in use in every quarter now finds the tire branch or distributor insufficient in satisfying the demand. The tire dealer, accessory dealer, automobile dealer, garage, and hardware jobber, will be the answer for truck tire distribution to meet the tremendous demand here and to

To the extent that the now simplified, profitable service feature is an additional detail in truck tire sales, will the dealers in truck tires be bigger, broader and better dealers, who know and appreciate that in proportion as a business increases in its scope is the opportunity bigger, broader, better.

The Thing Behind Master Trucks



BEHIND MASTER strength are master study and calculation—a triple alliance of knowledge, truck building experience and financial responsibility unequaled in the truck field.

Our engineers, not satisfied with making a truck "just good enough," determined to build the *best* truck possible to stand up under the *worst* possible road or load conditions.

Extra strength, balanced strength, the superquality that means service are put into Master Trucks. When you buy these trucks you buy **sure** Transportation Service.

Every detail is scientifically right—every part strong, powerful and permanent. Strength—EXTRA STRENGTH—is the dominant Master quality.

Every Master owner is assured minimum upkeep cost and maximum hauls.

Full Line-Six Sizes, from 11/2 to 6-Ton

MASTER TRUCKS, Inc., 3132-3138 S. Wabash Ave., Chicago

MASIER

Master of the Load on ANY Road

Steel and Rubber Markets

Steel Trade Rapidly Nearing Peace Basis

The readjustment of the steel industry from a war to a peace basis is proceeding rapidly and satisfactorily. Allocations by the War Industries Board ceased November 30, and various government departments will henceforth place their orders independently. The termination of priority ratings leaves maximum prices as practically the only restriction on the industry, and it is believed that these will be abandoned with the ending of the year.

The mills are still busy, despite the cancellation of government contracts. Cancellations of government business are proceeding in fairly heavy volume, but take the form of "suspensions" rather than of cancellations, as the Government is carrying on investigations to determine how much of the strictly war business can be converted for peace purposes.

A recent announcement by the War Trade Board gives a long list of iron and steel products which have been removed from the export conservation list. Plates, however, have not yet been removed from the classification.

Steel Products Prices

Per ton, Pittsburg-			
Bessemer billets\$47	50	a	
Open hearth 47	50	a	
Forging billets 60	00	a	****
Sheet bars 51	00	a	****

Sheets

The following prices are for 100-bundle lots and over f.o.b. mill:

1310	16. 7	Criticis	Served	,	27	10	Cie	12								
Nos.	3	to	8					*	× +	*	×		 \$4	20	a	
Nos.	9	and	10.							*	*		. 4	25	a	
Nos.	11	and	12.							*			4	30	a	
Nos.	13	and	14.									٠	 4	35	a	
Nos.	15	and	16.										 . 4	45	a	
	-	_												-		-

No. 17 and lighter gauges are based on \$5.50 a \$7.50 per 100 lb. for No. 28 Bessemer black sheets.

Ga	Ivai	nized	She	ee	£8	3	0	ľ	3	15.	lâ	l (3 19	3	She	et	Gat	ige-
Nos.	10	and	11.			×	83			×	*				\$5	25	a	* * *
Nos.	12	to	14								×				5	35	a	
Nos.	15	and	16.			*									5	50	a	

Iron and Steel at Pittsburgh

Bessemer iron\$36	60	a	
Bessemer steel, f.o.b. Pitts 47	50	a	* * *
Skelp, grooved steel 2	90	a	
Skelp, sheared steel 3	25	a	
Ferromanganese (70%)250	00	a	
Steel, melting scrap 26	25	a 2	6 5
Steel bars 2	90	a	
Manganese ore. per unit 1	00	a	* * *

Prices of Finished Products

With the price of copper fixed, the market for all brass products is firm, but manufacturers do not quote except on specification, and the following prices for brass and bronze items are nominal: Sheet aluminum, 18 ga. & h'v'r 42 00a...

Copper sheets, hot rolled... 36 00a37 50 Copper sheets, cold rolled... 37 60a38 50 Copper bottoms... 44 00a45 50 Copper rods... 36 00a37 00 Copper wire... 29 25a...

High brass wire... 28 75a29 50 High brass rods... 28 75a29 50 High brass rods... 26 75a28 75

Low brass sheets	32 50a34 50
Low brass wire	32 50a34 50
Low brass rods	33 25a35 25
Brazed tubing, brass	37 00a39 00
Brazed tubing, bronze	42 50a44 50
Seamless tubing, brass	37 50a39 50
Seamless tubing, copper	41 00a43 00
Seamless tubing, bronze	45 00a46 00
Full lead sheets	10 00a
Cut lead sheets	10 25a

COPPER.—The copper market is dull at present, owing to the fact that producers are satisfied that present prices are justified on the basis of costs and feel that there can be no cut of any importance as long as labor and transportation are high. Consumers, on the other hand, are not willing to pay the price demanded, which is the maximum to remain in force until the end of the year. Established prices are: 26 cents a lb. for carload lots and 27.3 cents a lb. for lesser quantities.

ALUMINUM.—A base price for aluminum of 33 cents a lb, f.o.b, producing plant for 50 tons and over for ingots of 98 to 99 per cent. has been established by the War Industries Board. The price became effective June 1.

TUNGSTEN.—The outlook for tungsten is extremely uncertain and the market for the time is stagnant. Consumers are showing little interest at the prices at which purchases may be made. About a hundred representatives of the trade have met to discuss the situation, and a protective committee has been named. Further conferences are likely. Prices are purely nominal, being quoted roughly as follows: High grade scheelite, \$25; high grade wolframite, \$22 to \$23; off grades, \$17 to \$22, according to quality.

Prices of Old Metals

The following prices are current for old metals:

Buying Solling

Aluminum	uying.	126	ming.
Cast scrap20	a21	22	a23
Sheet scrap21	a22	23	a24
Copper—			
Heavy machinery comp. 181	%a19	20	a21
Heavy and wire18	a181/2	194	6a201/2
Light and bottoms161	½a17	18	a181/2
Heavy, cut and crucible19	a191/2	201	2a211/2
Brass, heavy101	½a11	111	6a12
Brass, light 9	a 91/2	1.0	a101/2
No. 1 clean brass turn'gs.10	a101/2	11	a111/2
No. 1 comp. turnings16	a161/2	173	6a18
Lead, heavy 6	1/4 a 6 1/2	6.7	5a 7
Zinc scrap 5	a 51/4	5.7	5a 6
Block tin, scrap56	a58	60	a62

Rubber Market Firm

The crude rubber situation at present lacks features of importance, but there is a good inquiry from manufacturers and a good demand for all grades.

Prices quoted December 2 were:

Para-Up-river, fine, per lb	*66	a	†68
Up-river, coarse	*38	a	†40
Island, fine	*57	a	†59
Island, coarse	*25	a	†27
Caucho, ball, upper	*38	a	+40
Caucho, ball, lower	*34	a	†36
Cameta	*26	a	†28
Ceylon-First latex, pale crepe	**	a	†63
Brown, crepe, thin, clean		a	†60
Smoked, ribbed, sheets	4.4	a	†611
Centrals-Corinto	*37	a	‡39
Esmeralda	*37	a	:39

Guayule, wet		a	
Guayule, washed and dried.	48	a	
Balata, sheets	‡90		
Balata, block, Ciudad	**	a	75
Balata, block, Panama	59	a	60
Mexican—Scrap	39	a	
Slab			
African-Massai, red	155	a	
Mosambique-Spindles			

Current quotation for free rubber. † Government maximum.
 Nominal.

Goodyear Anticipates Profitable Year

The annual meeting of the Goodyear Tire & Rubber Co., Akron, O., held at the company's offices, Dec. 2, 1918, showed that the past year's business was the most successful in volume and profits of any year in the history of that company. Gross sales for the fiscal year ending Oct. 31 amounted to \$131,000,000, an increase of \$20,000,000 over the previous year. Net profits for the year were \$15,388,190.74, as against \$14,044,216.10 for the preceding year, subject to government war tax, the amount of which is not yet determined.

President F. A. Seiberling, in his report to stockholders, stated that approximately 15 per cent. of the company's total volume for the year had been government business, upon which but a very low percentage of profit, if any at all, had been made, and that final costs might show that this business had actually been handled at a loss, but that no matter what effect this might have had on the net profits of the year, the company had welcomed the opportunity to do its share in helping to win the war, and took a just pride in its record.

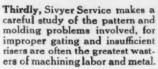
"The results for the year are satisfactory," he said, "when we take into account that our factories were operated with an inadequate supply of labor during the entire year, more than 6,000 of our employees having entered military service—43 having given up their lives in their country's cause—and that at no time during the year were we able to supply product in sufficient quantity to meet the demand, government restrictions since July 1 limiting our production of pneumatic tires, up to six inches, to 50 per cent. of the preceding year's production.

All of the directors were re-elected, as follows: F. A. Seiberling, C. W. Seiberling, G. M. Stadelman, F. H. Adams, P. W. Litchfield, H. B. Manton and J. P. Loomis. The directors in turn elected the following officers: F. A. Seiberling, president and general manager; C. W. Seiberling, vice-president and manager of purchases; G. M. Stadelman, vice-president and manager of sales; P. W. Litchfield, vice-president and factory manager; A. F. Osterloh, secretary; W. E. Palmer, treasurer and assistant secretary; H. J. Blackburn, assistant treasurer.

SIVYER S CASTINGS

The Sivyer Service of providing Electric Steel Castings has for its objects the decrease of machining costs and the increase of wearing-quality and life. Both are attained by methods which result from long experience and begin with the design of the casting itself. When we find that a casting we are asked to furnish is of a design not consistent with good foundry practice, we study its function in the completed unit and offer the necessary suggestions to make it a really practicable casting job without affecting in any way its function and efficiency.

Secondly, Sivyer Service analyzes the functions of the casting and specifies the proper composition steel for the job; long experience with carbon and alloy steels has enabled ustoreduce costs and increase quality remarkably for many different industries.



Fourthly, Sivyer Service analyzes carefully the proper annealing methods to be used and controls their proper application through unfailingly efficient equipment and men. In short, the Sivyer Service supervises every step necessary to secure unusually and unfailingly good castings of electric steel. It never relies on one factor alone, relies very little even on the natural freedom of electric steel from occluded gases and on its commonly recognized merit in resisting crystallization. It also depends but little on the inherent scientific accuracy of the electric furnace process. From casting-design to sand-blasting and tumbling, the fundamental superiority of Sivyer Steel is due to its men and metal. Their value is best proved by the fact that, although the production of steel castings is generally looked upon as a local one, the Sivyer market is national.



THE punctilious care exercised at every stage in the production of Sivyer Castings goes even to the minor phases of pouring. The opening of each mold is kept carefully covered to the last minute. It is the final precaution in preventing sand-spots in the castings, which so often raise materially the costs of machining. The painstaking thoroughness here exemplified is one of the many factors which have won for Sivyer Castings their national market

SIVYER STEEL CASTING COMPANY, MILWAUKEE

Organize Motor Truckmen's Division of M. T. A. A.

By C. P. SHATTUCK

PLAN for merchandising transportation by motor trucks, and involving what is believed by the promoters a solution of the shipping and haulage problems of the manufacturer, as well as for caring for idle trucks, is being perfected by the Motor Truckmen's Division of the Motor Truck Association of America, New York City.

The plan is similar in its scope to that of the Detroit Transportation Association described in the November issue of the COMMERCIAL CAR JOURNAL, differing in several particulars, and these have to do with membership, selling the service and directing the activities of the truck

Must Join Association

Membership in the Motor Truckmen's Division will be limited to those operators of owners of trucks who are sound financially and whose reputation as a transportation agent is above reproach. The applicant will be obliged to become a member of the Motor Truck Association of America before being accorded representation in the Motor Truckmen's Division, which is practically a subsidiary of the association and which will make its headquarters at 1790 Broadway, the offices of the Motor Truck Association of America.

Merchandising the Service

Service is to be sold the shipper by a transportation expert who will first make a careful analysis of the territory served, shipping conditions, costs, etc. If the haul is a long one and it be possible to ship by the common carriers, a plan will be evolved and will include use of the truck to and from the terminals. If a long haul by truck be necessary to meet certain requirements, service will be provided. Should a concern desire service by contract, large or small, it will be supplied after the transportation expert has investigated conditions.

The plan provides for the filing at the office or exchange of complete data as to the capacity of the truck and type of body. Trucks are to be supplied that will best meet the requirements of the customer, and preference will not be given a member having a van body because he is in need of work when the transportation involves the hauling of 20-ft. girders, for example. In other words, the trucks are not always to be sent out according to their listing at the exchange.

Short Hauls to be Encouraged

W. J. Thompson, the promoter of the plan, who has been working out its details for the past two months believes that the truck should be employed for

short haul work and that long hauls belong to the railroad. His plan provides for his exchange acting as shipping agent for the merchant or manufacturer, and includes the use of a central warehouse whenever necessary. He also believes that the maintenance of a garage and repair shop for supplying service to the members of the exchange and at cost, as well as the purchasing of supplies, etc., can be included in the scope of the plan.

Handling Idle Trucks

Mr. Thompson says that there will be few if any of the trucks of the members idle after the plan is placed in operation, for an intensive sales campaign is to precede a large membership and will be continued. He points out that large trucking companies frequently are compelled to hire outside trucks and very often do not have time to investigate their owners. "Merchants will not buy an unknown quantity," said Mr. Thompson. "They will not intrust their goods to the owner of one or two trucks because they have not had the time to investigate his standing. Every applicant to our association will be carefully and thoroughly investigated, and he must be financially sound as well as carry insurance that will cover fire, theft, liability, accident, etc., and for the most valuable cargo a truck can carry. Every member will have to conform to the rules governing the operation of the trucks in our service."

The expenses of operating the exchange are to be met by a membership fee in the Motor Truckmen's Division, presumably annual dues. Effort is to be made to interest all trucking companies in establishing a uniform rate so as to avoid price cutting. The Motor Truckmen's Division will not, according to Mr. Thompson, be competitors in the field of long hauls or inter-city transportation.

Paragon Motor Freight Co., which conducts a motor express between Pittsburgh, Youngstown, Cleveland, Akron and Canton, has discovered a method of stimulating the interest of its drivers in their work and thus insuring efficient service. The company has 35 Gramm-Bernstein trucks in operation, and each driver is either owner or part owner of the truck which he operates. The trucks are insured for \$10,000 and the drivers are bonded. The shipper is protected against losses by the issuance of regular bills of lading.

Smith Bros., Los Angeles, Cal., will distribute Cleveland tractors in southern California.

Important Road to be Built in New Jersey

An appropriation of \$21,000 has been granted by the War Department, through the Ordnance Department, for the construction of a road from the southern end of the Amboy Bridge to Bordentown avenue, in South Amboy, New Jersey. The road covers a distance of two miles, and when finished will complete a straight stretch of hard pavement from Newark to the shore localities of Red Bank, Long Branch and Asbury Park.

A temporary road will be built for use during the winter, and a permanent highway will be constructed next summer.

An indication of the importance of the road is shown by a count made Nov. 1, when 794 trucks and 1,145 passenger cars passed over it from 6.30 A. M. to 5.30 P. M.

Roads in Hampton, Va., District to be Improved

The War Department has granted an appropriation of \$1,700,000 for the development of roads in the vicinity of Hampton Roads, Va. The work is to be done by the construction division of the Army and will consist of improvements on roads from the Road Naval Base No. 2 to Camp Morrison; from the navy yard to Portsmouth; Norfolk to naval base at Lewells Point, to Ocean View, and improvements on roads from Fort Monroe to Langley Field, to Hampton and to Newport News.

New Detroit Road Important to Merchants

The completion of the Detroit-Monroe-Toledo section of the Dixie Highway marks another important step in the country's program for highway improvement. It is estimated that motor trucks during the coming year will carry at least 150,000 tons or 300,000,000 lb. of freight over this road. This is on a basis of 500 tons a day for 300 days, a conservative estimate, as the road will be open for traffic 365 days in the year. This is an important item, since it will mean the release of 75,000 freight trains for other purposes.

Willys Takes Over New Process Gear Corporation

John N. Willys, president of Willys-Overland, Inc., has taken over the New Process Gear Corp., with capital stock of \$3,000,000. Thomas W. Meacham and other members of that family have retired from the business, having sold their interests to Willys.

It is expected that the capacity of the plant will be increased to meet the after-the-war manufacturing program of the Willys-Overland Co. Control of the plant is still in the hands of J. Allen Smith and no change in the management is expected.



A 1919 Message to Dealers

When the nation's energy in the period of reconstruction has been fully swung back into the gigantic industrial expansion of peace ahead in the new struggle for commercial supremacy, only action—action at high speed—will keep us in the ranks of the fast procession. The time for "thinking it over" will be past.

Be ready.

Arrange now for the sale of Polack Truck Tires in your territory. With a whole nation moving swiftly on motor truck transportation, your opportunity and your need for increased prestige is in an old established truck tire like the Polack.

Write us now for full details.

POLACK TYRE & RUBBER G.

1876 Broadway

New York



STABILITY

Motor Transportation Conference Arouses Unusual Interest

HAT owners of commercial cars and prospective purchasers appreciate any effort made by the dealer in supplying information dealing with efficient and economical use of trucks is proven by the large attendance and interest manifested at the Motor Transportation Conference conducted by the Colt-Stratton Co., in their show rooms at New York City, November 12-23, inclusive. Nearly 900 attended the conference.

The company, at considerable expense, arranged a very practical list of subjects, these dealing with practically every angle of transportation, and the speakers were men of wide experience and many prominently connected. Several Government representatives were present as well as transportation and mechanical engineers. Practically every phase of the use of motor trucks was dealt with, and at the conclusion of the lectures those present asked questions which led to a general discussion of the subject. Many interesting facts were thus brought out. The subjects and speakers were as follows:

Motor Vehicles in the War, Lessons for Commercial Users; Major George A. Green, assistant chief engineer, Tank Corps, British Army.

Warfare by Automobile; John R. Eustis.
Connecting City and Country by Motor;
F. W. Fenn, secretary Rural Motor Express
Committee, N. A. C. C.

Methods and Devices for Increasing Motor Transport Efficiency: Cost Accounting, Routing, Loading Devices; T. D. Pratt, executive secretary, Motor Truck Association of America. Inc., and William P. Kennedy.

Trailers; George Cline, Jr., Troy Trailer Co.

Fuel Economy: Hugo Gibson.

Pneumatic Truck Tires; A. W. Ellis, Goodyear Tire & Rubber Co.

Problems and Possibilities of Store Door Delivery; Joseph Husson, editor Commercial Vehicle, and Arthur G. McKeever.

Motorizing the Mails: James I. Blakslee, Fourth Assistant Postmaster General.

Inter-City Haulage; E. S. Foljambe, directing editor, Commercial Car Journal.

Return Loads and Return Load Bureaus; H. G. Shirley, Highways Transport Committee; J. F. Winchester, secretary Motor Truck Club of New Jersey; A. G. Way. Jr., executive secretary of Motor Truck Club of New Jersey; Cyrus C. Miller, Federal Food Board of New York.

Relation of Highways to Motor Transport Efficiency; Arthur H. Blanchard, president National Highway Traffic Association; C. M. Pinckney, chief engineer, department Public Works, Bureau of Manhattan; Harry S. Quine, Goodyear Tire & Rubber Co.

Traffic Congestion and Motor Transportation; Samuel W. Taylor, director National Highway Traffic Association; inspector O'Brien, traffic division, New York police department; A. G. Batchelder, executive secretary American Automobile Association; General Francis V. Greene.

Moving pictures of the Renault factory and tanks were shown at the conclusion of each evening's conference.

The conference demonstrated the increasing interest in motor trucks by men analyzing the possibilities of establishing transportation companies and operating cars in express and other service. The majority of those who took advantage of the opportunity afforded to talk with the speakers at the conclusion of the evening's conference were keenly interested in cost figures. These were supplied in some instances by some of the transportation experts, but it was evident that the demand exceeded the supply.

Much of the success of the conference is due to the efforts of John R. Eustis, who directed it and obtained the speakers. The conference is to be supplemented by similar events, educational and instructive in their scope, and will be held semi-annually.

New York Headlight Law Not Entirely Satisfactory

At a meeting of the Illuminating Engineering Society held in New York City, Nov. 14, a report of the committee on motor-car headlight specifications was read. A demonstration of the apparatus used in testing headlight apparatus to determine whether or not it conformed to specifications, was given, and, in a discussion which followed, the point was made that, while the chief object of the rulings was the control of headlight glare, it was important that headlight devices be so constructed that sufficient illumination is obtained. One speaker said that in Massachusetts more accidents were due to want of sufficient illumination than to a blinding glare.

The committee reached the conclusions that some of the requirements of the headlight law were not sufficiently specific and that they had not yet been given a fair trial.

Nash Returns to Kenosha

Charles W. Nash, who has ably assisted Assistant Secretary of War Ryan in the carrying out of the aircraft program, has returned to the Nash factory at Kenosha.

During the absence of Mr. Nash the work of the Nash Motors Co. has been supervised by C. B. Voorhis. During the war the plant produced \$37,000,000 worth of transportation equipment. The increased manufacturing facilities, necessitated by the acceptance of Government contracts, will now be employed in the production of cars and trucks for general consumption.

Massachusetts Dealers Are Alarmed Over Truck Legislation

Legislative action in the direction of limiting the weight of trucks which will be allowed to operate on Massachusetts highways led dealers in that State to protest against further regulations affecting their business.

A special legislative commission has been appointed to draw up new rules for truck operation, and in addition to the regulation affecting the weight of trucks, regulation of the width is being contemplated. Charging of larger automobile fees, further control of headlight regulations, limiting of the number of passengers in jitneys and specifying the number of trailers that a truck may draw are subjects also under consideration by this commission.

J. H. MacAlman headed the group of dealers who entered a protest against the curtailment of business which would undoubtedly follow the enforcement of regulations which seem to encourage the policy of building the truck to fit the road rather than the road to fit the truck.

Receivership of Smith Motor Corporation Ended

The inventories and good will of the Smith Motor Corp. were acquired by the Dearborn Truck Co., when the receivership of that company was terminated recently. The Dearborn Co. also acquired by purchase the name, business and good will of the Smith Form-A-Truck Co., the holding corporation, which was not insolvent. The Dearborn company will continue the manufacture of the Smith type of trucks and the Smith name will be continued as a trade brand. Borg & Beck, of East Moline, Ill., bought the Smith factory, and a large amount of machinery and equipment was sold at public auction on November 22 by Samuel L. Winternitz & Co. General creditors will realize 25 per cent. of their

Truck Hauling Coal Makes Record Saving

When the Fuel Administration ordered the railroads to furnish no more cars to the "wagon" coal mines (those located a distance from the railroad, and necessitating a haul to the spur), the Dixie Bee Line Coal Co., of Morton's Gap, Ky., decided to purchase a truck. A two-ton Federal truck was bought and during one month loaded 21 cars. A 45-ton car is easily loaded in six hours, hauling the coal about one mile. With horse-drawn equipment the car could be loaded for 60 cents per ton, or \$30 per car. With the truck the car is loaded for \$11.43, including all items. This saving of \$18.57 per car amounts to \$334.26 per month, if 18 cars per month are



Better Foundations and Drainage Necessary for Motor Truck Highways

XTRACTS from an address delivered by State Engineer Thompson before the Atlantic City, N. J., Chamber of Commerce. show that at least one road construction expert believes in improving and strengthening the present design and working with an eye to the future. His subject, "Future Traffic Needs," dealt with the needs of future traffic, and the character of pavement and foundation that will best serve those needs. He stated that he had come to the conclusion, as he thought almost everyone else has who has to do with the problem, that the present traffic is but a very small beginning of that traffic to come. He

"We have seen the destruction that has taken place on our roads during this past winter, due not only to the traffic, but due to foundation conditions, or the lack of foundation, due in many cases to inadequate drainage. Some of our best roads, or those which up to last fall we considered our best roads, and some main through routes went absolutely to pieces last winter, turned upside down. The big trucks were getting stuck where a year ago in the winter they went through with perfect ease and safety.

The answer to that is, as we see it, to spend all the money that is necessary in the drainage of the subfoundations, using concrete foundations for the upper surface, of whatever character that may be. Those, as nearly as they can, will be designed to meet the traffic that we estimate or can reasonably foresee, will go over them.

"There will undoubtedly have to be a great deal of drainage done to properly and adequately drain those roads, but we intend to do it. There will be, I imagine, 300 miles of our state highway routes in South Jersey, that, in the opinion of the engineering department, or in my opinion, at any rate, should be built with concrete pavement. In the northern section of the state, where bituminous materials are cheaper, there may be some pavements built with perhaps 2 inches of bituminous concrete or sheet asphalt top on a concrete base that will not be in any case less than 6 inches in thickness and will possibly be in some cases from 7 to 8 inches in thickness.

We have been taking a traffic census for the past year that shows an increase of traffic over that existing two years ago of 300 per cent. in some localities and in other localities 500 per cent. in volume of traffic and also in weight. The number of trucks has increased by thousands. We now have going over our main highways from Philadelphia to Newark and New York and points east,

truck trains—regularly organized companies operating on regular schedule.

"It has developed to such a stage that those truck companies keep repair cars on the road, light cars equipped with spares, with all kinds of apparatus for getting trucks out of ditches and out of holes, and patrol those routes constantly, picking up the cripples along the road, helping them out of their difficulties and sending them on their way.

"The bridges on all the big highway routes are being designed for a maximum load of twenty tons, seventy-five per cent. of that to be on the rear axles, on two wheels spaced eight feet on centers. Our pavements will in no case be less than eighteen feet in width. That is the minimum the law allows. In some localities they will undoubtedly be widened where the congestion of traffic occurs, and where such a widening is very necessary.

"We are planning now to build an eighteen foot pavement, with three foot stone shoulders on either side, penetrated so that we have in effect a twenty-four foot pavement, minimum, and the carriageway or the graded width of the road will in every case be thirty feet, so that from gutter to gutter there will be thirty feet of available way.

"We are trying to limit our grades to five per cent. There will be a number of instances in North Jersey where they will exceed that, but they are comparatively few. We are designing our alignment so as to have nothing to exceed a six degree curve except in a few isolated cases.

"No grade crossing elimination is to be attempted this year, and probably will not be attempted next year, where it involves the use of structures like bridges or viaducts or anything of that kind, on account of the high cost of materials and the fact that steel is practically unavailable. The elimination of perhaps fifty per cent. of the grade crossings in New Jersey, though, on the state highways, will be accomplished in some way during the next five to six years.

"This outlines the problems we are up against and the character of the work we hope to do and intend to do if we carry out our policy. We must go on with the highway program, not only we, but every other state in this section of the country.

"There has been considerable agitation in some quarters to cut down the highway programs. That would seem to be a very serious mistake. If we stop building roads now, until prices become more normal, we will have no roads left when prices become more

normal. The attitude of those who have to ship material over the road is to get roads at any cost and they are much peeved in a good many cases because they cannot get them over the roads in large quantities and in as heavy loads as they would like.

"We had kicks all last winter from shippers who wanted to get goods through and could not because in a great many places the highway was impassable and the trucks were primarily responsible for it. As everyone knows, our roads were not designed for the class of traffic going over them now, and if they are unable to stand it now, they certainly will be unable to stand it unless we improve the design, strengthen our roads everywhere and plan for the future."

Motor Companies Aid in Work of Americanization

Two companies which have taken up the problem of helping to educate their foreign-born employees to become Americans are the White Motor Co., of Cleveland, Ohio, and the Youngstown Sheet & Tube Co., of Youngstown, Ohio. In both plants it is endeavored to impress employees with the idea that an understanding of American speech and customs and the attempt to live up to the American standard are factors that make for success in life in this country.

The White Motor Co. publishes the White Book, a semi-monthly magazine, which is proving a potent instrument in educating its employees. All employees are required to have taken out their first papers. There are twenty-eight different nationalities represented.

The Youngstown Sheet & Tube Co. conducts a school, in which, in addition to courses in reading, writing, spelling, grammar and arithmetic, special classes for instruction in citizenship, civics and kindred branches are conducted. Since the opening of the school in January, 1917, the number of teachers employed has increased from 6 to 14.

Trucks Act as Traveling Stores

The American Rochdale Cooperative Co., of Michigan City, Ind., has a motor express idea of its own. The company is planning to run motor trucks from its different stores to points in the surrounding territory, the trucks acting virtually as traveling grocery stores. The company will establish grocery stores in various parts of the United States and Canada.





Photograph of 36x 6 Goodyear Pneumatic Cord Truck Tire used on trailer which carries three-ton loads of logs for M. P. Mickler Lumber Co., Thonotosassa, Florida



Correct Tires for Heavy Duty Off Good Roads

"Goodyear Pneumatic

Cord Truck Tires have

enormously reduced our

hauling costs under con-

ditions that make the use

of solid tires practically

impossible." - M. P.

Mickler Lumber Co.,

Thonotosassa, Florida.

DOWN at Thonotosassa in Florida, the Mickler Lumber Company uses Goodyear Pneumatic Cord Truck Tires to equip entirely two 3/4-ton trucks and two trailers.

Each truck with a trailer is used to haul three-ton loads of logs over a four-mile

route, three-quarters of which lies in deep sand.

Solid tires have failed in this difficult work. But the easy rolling tractive Goodyear Pneumatics have enabled trucks and trailers to replace permanently two four-mule teams.

Indeed the motor transports, in traveling 15 miles an hour through the bad trail and faster on the

better stretches, make nine round trips daily as against three round trips per day formerly made by the teams which pulled only two and one-half tons at a time.

Therefore each of the Goodyear-equipped trucks with their trailers deliver 54,000 pounds a day as against 15,000 pounds hauled by each of the mule teams.

At \$10 a day for expense, the mule team tonmile cost was 16 cents, whereas, at \$15 a day for operation and upkeep, the truck-andtrailer ton-mile cost was $6\frac{9}{10}$ cents, or more than one-half less.

It is also noted here that the Goodyear Pneumatic Cord Truck Tires, known as most economical on long hauls, have enabled very sizable savings to be made on these short hauls.

And attention again is directed to their exceedingly tough construction which withstands the rough roads, the crushing loads and the splinter-littered sawmill yard.

Obviously, dealers offering trucks equipped with Goodyear Pneumatic Cord Truck Tires can assure their successful operation under conditions

such as are described.

Also, it is apparent they can make sales to people who previous to this time have refused to consider motor trucks for their work.

In addition, the fact that Goodyear Pneumatic Cord Truck Tires were the first tires of the type to be made in all the needed sizes for trucks affords the truck dealer specifying them another strong hold on the preferences of local truck users.

rough roads, the crushing loads and the splinter-littered sawmill yard.

Obviously, dealers offering trucks equipped with Goodyear Pneumatic

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

CORD TIRES



The Bearing that Tomorrow's Farmer will bank on

WITH every industry of man speeded to meet the needs of a world at war, the quite usual importance of harvests has been multiplied a thousand fold.

Already increased acreage has been sown and other thousands of acres cleared for planting. It is in this huge work that the tractor will come to its own.

Tractors have come to stay. And the character of the work they are to do emphasizes the need for perfect machines. Nothing cheap, nothing flimsy can stand the strain. In gruelling service, day and night, one season upon another, they must stand up.

The wearing parts—where friction is born—will be protected with ball bearings. And they will be dependable bearings of proven efficiency under abnormal service conditions.

It's interesting to know that because of past performance Hess-Bright Ball Bearings are the natural choice for this service. And their reputation and the manner of their making will not fail.

THE HESS-BRIGHT MANUFACTURING COMPANY Philadelphia, Pa.

Where Performance takes Preference over Price



Tempered Steels Make Covert Strength

E XACTING heat-treating methods play an important part in the making of Covert Transmissions.

You can depend on the temper of the steels in Covert Transmissions, for the Covert heat-treating department represents the peak of efficiency—in equipment—in methods—in men.



Clydesdale MOTOR TRUCKS

The Proof of a Truck's Worth

A SUCCESSFUL motor truck is more than an assembly of constructional features which are mechanically correct.

No matter how scientifically excellent the principle of a motor truck part may be, the adaptation of it is the proof of its worth.

The Clydesdale is more than mechanically right, unit per unit. It is, as a complete assembly, exactly as good as any of its parts.

But the Clydesdale possesses exclusive features—time tried and proved in war and peace—that makes it an individual in the truck field.

You cannot help but recognize the advantages of the Clydesdale Automatic Speed Controller. No other truck has this feature.

"The Driver Under the Hood" describes this equipment. Its real merits can only be learned by an actual demonstration. But we can tell you in a few words what it does.

Imagine yourself behind the wheel of a Clydesdale truck. Move your throttle up the quadrant a ways and shift into first speed. Let in the clutch.

Without further use of the accelerator the engine will pick up the load and start the truck on its way.

Then shift through second, third, fourth speeds. The motor will automatically deaccelerate while you are shifting and accelerate as it picks up the load in each gear.

Now in high gear with the throttle bring the truck speed up to 8 or 10 or 12 miles per hour, any speed you desire. Drive on pavement, through mud, sand, uphill, downhill.

Leave the accelerator alone, just steer, that's all—and the truck will maintain a constant speed, the speed you first selected.

That, in brief, is the performance of the Automatic Speed Controller. It controls and yet it governs as governors operate on other trucks.

Another exclusive feature is the Clydesdale Radiator. The greatest trucking institution in the world, the London General Omnibus Company, adopted this as standard type after years of experimentation, so we copied it.

It has a tremendous cooling surface of plain copper tubing. It is mounted on coil springs to alleviate excessive vibration. Stave a hole through it and the driver can make a repair on the road in short order and be on his way.

Accessibility, unified, massive construction, a truck for constant service, even in the hands of an unexperienced driver, is Clydesdale.

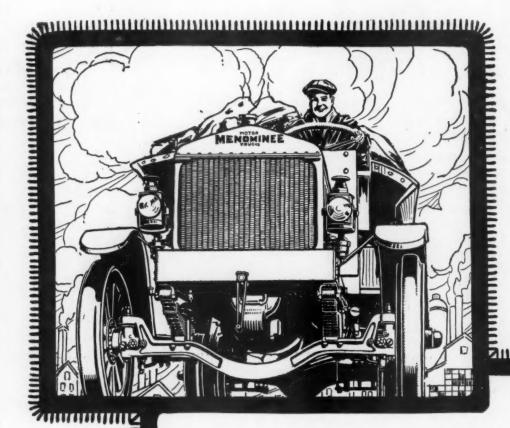
A truck of seven years' development, recognized from the Dutch East Indies around the world to Japan.

We build trucks away from the shifting labor market. Our workmen, most of them have been with us for years, they are experts, long trained in their individual jobs. Clydesdale trucks show this excellent workmanship.

We are selecting, with great care, a list of competent distributors.

May we not present our proposition to you who are interested in a solid, lasting truck business?

The Clyde Cars Company, Clyde, Ohio



FOR downright, day-after-day dependabilty, for exceptional economy of operation and upkeep, for their ability to meet every condition of hauling and delivery problems.

MENDMINEE

have won enviable recognition in the field of commercial transportation. Built to fit a fixed purpose, they are pre-eminently the masters of the road and load. Embracing units of universally recognized standards, with added features of construction, Menominee Trucks insure a degree of efficiency as near 100% as is mechanically possible.

Buyers who appreciate the importance of having a truck that does not call for constant mechanical attention are sure to recognize the dominant advantages of the Menominee line.

We have a number of big-business opportunities for aggressive dealers and distributors. Write.

Menominee Motor Truck Co.

Dept. 10, Menominee, Michigan

The Right Timken or None'

A Fundamental Policy of Timken Engineering

To the owner of a tractor, truck or motor car, one Timken Bearing looks very much like another, except in size, for all have the same basic principles of design.

Furthermore all Timken Bearings are of absolutely the same quality, made of the same Timken-made steel, machined, carbonized, heat treated, ground, inspected, tested, and assembled in exactly the same way.

Yet there is a sufficient difference between the bearings on the front axle spindle of your car and the ones at the corresponding point in any other model-even of the same make-to receive careful study by the best engineering brains Timken can devote to it.

Past experience, of course, makes each new installation easier, and the difference between two vehicles is sometimes very slight.

But the all-important fact remains that Timken takes nothing for granted.

It may be only a little variation in the taper or length of a roller, in the thickness of a cone or a cup, but Timken engineering insists that there can be only one correct Timken Bearing -out of all possible variations-for any particular place in any particular make and model of tractor, truck or motor car.

Therefore every detail in the specifications which can affect the operation of the bearings is given thorough consideration by Timken engineers and discussed in conference with the engineers of the car-builder, axle-builder, or transmissionbuilder, as the case may be.

These progressive manufacturers not only welcome, but urgently request this co-operation, because they realize how valuable to their customers is the highly specialized experience of Timken engineers, in working out thousands of bearing installations in every past and present type and size of automotive vehicle.

However, if some one manufacturer should prove the rare exception and insist on bearings not suited to his car, because of price or

any other consideration, Timken will, as has been the case on past occasions, pass up this business, whatever it might mean in profit.

Timken engineering goes beyond the point of insisting on the proper bearings. It also insists on correct mounting of those bearings.

For the design and construction of the supporting parts, the accuracy with which a cup is pressed into a hub or a cone fitted upon a shaft may affect the future satisfaction of the owner.

The remarkable record of Timken Bearings in service is due to three equally important factors:

- 1. Fundamentally correct principles of design, appli-cable to any installation in any type of motor vehicle.
- 2. Adequate manufacturing experience and equipment, even to the making of the steel itself.
- 3. Insistence upon proper selection and correct mounting of the one proper bearing for every installation.

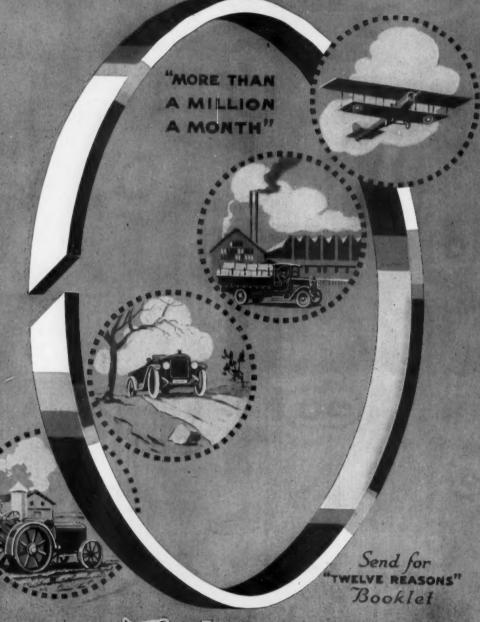


THE TIMKEN ROLLER BEARING COMPANY



TIMEN FOR MOTOR CAR, TRUCK & TRACTOR

Play a Prominent Part in America's Gas Engine Construction





106 SANFORD ST.

MUSKEGON, MICH.



Correctness of design, quality of construction and exclusive features of great value combine to make this a line that can be sold in any place and against all competition. The agency for it is the gateway to certain success for any energetic dealer.

The O. Armleder Co. Cincinnati Ohio



ARMLEDER

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IN selecting a truck to sell, the dealer is first of all confronted with the necessity of making his choice from one of two distinct classes. It must either be a commonplace truck or one having originality of design.

In the former case, the truck, at best, may be composed of first-class units, so assembled as to make it a fairly capable performer. But it is only one of a number of such trucks, each of which are so nearly like others that there can be no real argument advanced for its sale which cannot be applied

equally well to a number of competitors. The truck is really sold on the reputation of its parts, and thus many makes are placed on the same dead level. Accordingly, it becomes a more or less difficult truck to sell, except in such times as the demand exceeds the supply.

In trucks of the second class, an entirely different condition prevails. Here design is the dominant element. Instead of being haphazardly assembled, high-grade units are incorporated into a preconceived design that does accomplish certain definite purposes. The units are used, not because of the selling power of their name, but because they have the quality or ability that fits them to best accomplish the desired purpose.

In trucks of this class, the conscientious designer studies the faults and weaknesses of existing trucks and seeks to design parts which will overcome them and make his truck a more capable performer. The individual part becomes subordinate to creating a harmonious whole of uniform strength and super-ability.

Such a truck is sold upon the character of its work, the possession of certain features which overcome acknowledged weaknesses and the ability to successfully do more than other makes. The dealer here has plenty of



FEATURES

sales arguments, for he can show the presence of this part or the construction of that part for the purpose of overcoming prevailing faults; he can point to the greater ability of the truck, because of its harmonious design, and can show valuable features which are exclusive to this truck. He always has something which his competitor does not, and he is never on a dead level with other makes.

Remember, putting together an assembled truck is a mechanic's job. while creating a distinctive truck is a real designer's job. Any good mechanic can take a number of good units and assemble them into a truck, but that does not necessarily mean it is a good truck, because the various parts may not bear the proper relation to each other. On the other hand, in the carefully designed truck each part is present only because it is the right thing in the right place, bearing the right relation to the other parts and will do the right work.

The Armleder is one of these carefully designed trucks, having exclusive features which place it head and shoulders over competition. You cannot possibly talk of the Armleder without speaking of Armleder features, because each of them is there for the specific purpose of overcoming some weakness, imparting greater strength or developing higher efficiency. And they do it. That is the reason the Armleder is such a success, and why it sells against the stiffest competition. It has features other trucks do not have, and those things are important enough to weigh heavily with the buyer and cause him to choose the Armleder in preference to other good trucks.

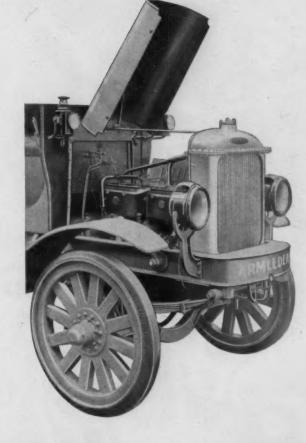
The Armleder features have been described in preceding ads. A few are here illustrated. Casual mention of a few will suffice.

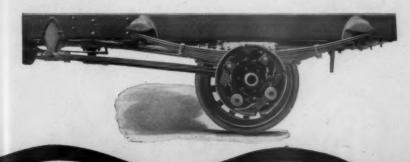
The radius rod construction is particularly valuable, and adds greatly to the life of the truck. It relieves springs of driving strain and universal joints of end thrust, prevents whipping of propeller shaft and protects vital parts from unusual shock and wear.

The propeller shaft has three universal joints, and is held in perfect alignment by a center bearing. It will not whip—a most important feature, as any experienced truckman will testify.

The springs are of patented construction, with many advantages, and automatically adjust themselves to the load. They are guaranteed against breakage or permanent deflection. Eliminate 48 wearing parts and 12 oil cups.

The frames are very flexible, wider channels than usual, strongly reinforced and cannot sheer out of square. The radiator is of our own design and exceptionally efficient. The steering is very easy, and all over the truck you find the individual touch and consideration which makes the Armleder a superior product.





A description of all the Armleder features, given in greater detail, will be supplied on application.



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It doesn't pay any conscientious dealer to handle a truck that hasn't the working ability or quality to back up his selling efforts. It, therefore, behooves him to select his line with great care.

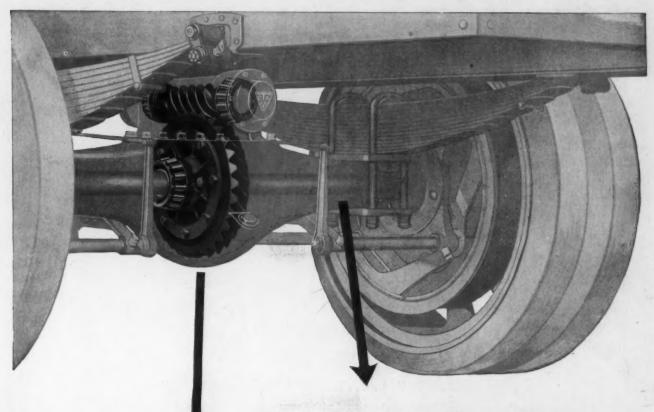
The Armleder is a truck on which to build a future, for it has those qualities which satisfy purchasers and make them come back for more.

The first sale of any truck is always the hard one. If the truck is right, subsequent sales are easy. And it is in repeat orders that the real profit lies. Armleder trucks are prolific breeders of repeat orders. Consequently, they make an ideal line for building a permanent and profitable business.

such men.

We have room in our selling organization for a limited number of high-grade dealers who are capable of turning exceptional truck merits and ability into big sales. There's a real proposition open to

O. Arr



★ The Bridge that Supports and the Gear that Drives

In a Timken-Detroit Worm-Drive Rear Axle one of the big vital problems of efficient commercial haulage finds a practical and simple solution.

The axle has just three jobs, to carry the load, to drive the load, and to stop the load. Timken-Detroit Worm-Drive Axles do these three things with everything that is superfluous left out.

The axle housing is a steel bridge in which the greatest amount of load-supporting and strain-resisting strength is obtained with the least weight of metal through a scientifically correct combination of the hollow tube with the rectangular, or box-like, one-piece housing.

The problem of load-driving and gear-reduction is by the use of worm and worm wheel reduced to its simplest form—direct drive through two strong, simple units, with only one reduction.

Brakes are of ample size, and correctly designed to bring the truck to a dead stop in the shortest distance without jolt or jar.

The one greatest cause of wear to truck axle parts is eliminated by enclosing the driving members within the housing, making positive lubrication possible with no entrance of dust, grit, sand,

mud or other foreign substance to grind away gears, shafts and bearings.

This type of axle construction has now had over six years of continuous and successful demonstration under the best built motor trucks in America and many years of service in Europe.

In all that time not one of these gear units has worn out in legitimate service. The only cases of worn gear trouble reported to us have been caused by deliberate use of a lubricant containing material which would wear out any part in rolling contact. Scores of worm-drive trucks have traveled over a hundred thousand miles (many over two hundred thousand), and are still going, with the worm-drive unit in as good working order as when the truck was new.

A prospective buyer needs no argument other than the actual facts of service, which can be obtained from any user of trucks equipped with Timken-Detroit Worm-Drive Axles.



THE TIMKEN-DETROIT AXLE CO.

Detroit, Michigan

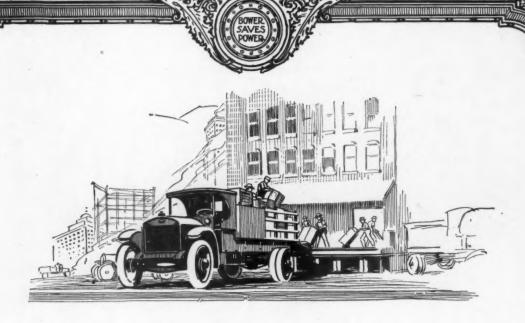


Oldest and largest builders of front and rear axles for both motor cars and trucks.

TIMKEN-DETROIT

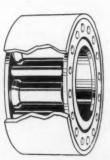
AKLES

For Efficient COMMERCIAL Haulage



Bearings That Cut Down Operating Expense

When a truck is equipped with Bower Roller Bearings upkeep cost is reduced to the minimum. Because the roller is of maximum diameter, and because radial and end thrusts are borne by separate surfaces, the wear in Bower Roller Bearings is reduced to the minimum. Consequently, no time need be lost in making adjustments. In the case of trucks, where a minute's delay oftentimes means dollars of loss, this is an important item.



ROLLER BEARING CO.
Detroit Michigan



PAIGE

The Most Serviceable Truck in America

MOTOR TRUCKS

It is with great pride and satisfaction that we announce a complete line of Paige Motor Trucks.

The entry of this company into the American truck field is a logical step in the expansion of the Paige institution. Ten years of experience in building high-grade motor cars have supplied an unusually broad perspective in the essentials of designing and manufacturing.

As a matter of record, our activity in the motor truck field covers several years. Paige trucks had been designed and built when our Country entered the War.

Then, when it became our duty to turn to War Work, the Paige Company, because of its large facilities, experience and reputation, was selected along with several other representative Companies to build trucks for overseas duty—to help Win the War.

This War Work not only greatly expanded our Engineering Department, but also gave it a great breadth of experience in truck designing. It perfected our methods, our precision and quality of manufactury. Daily deliveries of trucks to the Government this past year offer the best proof that Paige has kept faith and kept pace.

However, to meet the pressing War-Time needs of the Government we have been obliged enormously to increase our manufacturing capacity.

Paige now has one of the largest and most completely equipped motor truck plants in the World.

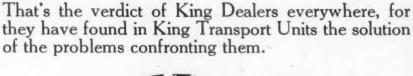
As the result of these exceptional opportunities and this thorough preparation, we now offer in the Paige truck a product worthy of an honorable nameplate, designed to uphold every tradition of Paige Quality, a motor truck intended to be and firmly believed to be the most serviceable truck in America.

PAIGE - DETROIT MOTOR CAR COMPANY, DETROIT, MICH.



Your Truckand the King

Send today for special booklet on the use of the King in connection with the truck you're handling.







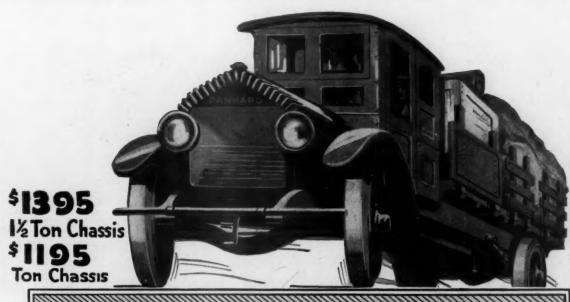
For the market is practically limitless. It is not limited to new truck prospects, although King Transport Units are a big help in closing many truck sales. But whether or not they are able to get new trucks, they have a vast field to work among present truck owners—giving them more capacity for their present equipment—saving time, money and man power.

If you want to get your share of this big business, write us today. We will send details of the King proposition for your consideration.

King Trailer Company

2131 Main Street

Ann Arbor, Michigan



Every recognized and standard unit upon which the industry's experts have placed their stamp of approval will be found in the Panhard. Here is the astonishing fact that the best of "truckdom," added to an exclusive twin frame construction, makes the Panhard the most remarkable truck value in the country.

The Panhard is built strongest where the load is greatest. Its twin frame guarantees long life under hardest service

STANDARDIZED PARTS. Note these ideal truck features contained in the Panhard—the twin frame truck:

MOTOR—35 horse power, 4 cylinder, three-bearing crankshafts; overhead valves insure maximum power on small fuel consumption.

FRAME—Panhard twin frame design.

LUBRICATION—Splash system.

IGNITION—Connecticut distributor, driven from Electric Auto-light Gen-erator.

STEERING GEAR-Lavine worm and split nut type.

CARBURETOR—Stromberg M. i.

BATTERY—Willard.

AXLES—Torbensen rear axle, approved.
Internal gear.

RADIATOR—Perfex.

TRANSMISSION—Fuller.
DRIVE—Hotchkiss.
TIRES—Firestone.

Dealers' Opportunity

Dealers who know say there isn't another 1 and 1½ ton truck to compare with the Panhard. Everywhere dealers are mak-ing profit and maintaining their volume of sales by our liberal dealer plan. Write or wire today for the Panhard proposi-tion—written to make dealers prosperous. Cash in on the demand for a dependable, strong, economical truck. Act!

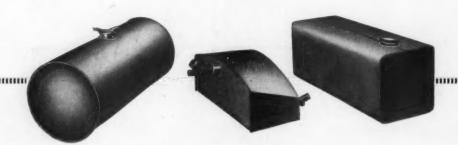
Built in 1 and 11/2 ton models. Complete detailed specifications on application

PANHARD MOTORS COMPANY

Department 27

Grand Haven, Michigan





Our abundant facilities, expert operators and long years of experience in sheet-metal work combine to give truck, tractor and passenger car makers unusual service in quality products, reasonable prices and quick deliveries.

A. B. & B. soldered and welded fuel tanks have made a reputation for durability and strength which the roughest treatment cannot discount.

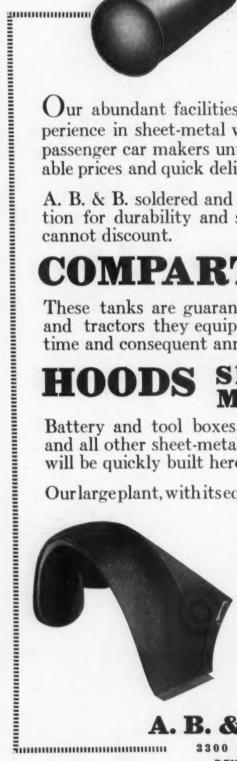
COMPARTMENT TANKS

These tanks are guaranteed leak-proof and so give the trucks and tractors they equip immunity from service repairs, loss of time and consequent annoyance.

HOODS SHEET FENDERS

Battery and tool boxes, mufflers, runningboard shields, pans, and all other sheet-metal parts used in automotive construction will be quickly built here over your specifications.

Our large plant, with its equipment of lathes, drill and punch presses,



grinders and turret lathes will handle youremergency and other work expeditiously.

Send blue prints and specifications for estimates. Samples of stock forwarded promptly.



A. B. & B. Specialty Co.

3300 Fond Du Lac Avenue Milwaukee. Wisconsin



FRUEHAUF TRAILERS IN GREAT DEMAND; WONDERFUL OPPORTUNITY FOR DEALERS



The Fruehauf Trailer, operated by the Detroit Creamery Company and shown above, is hauling 12-ton loads 50 miles daily over the streets of Detroit. The average cost per ton-mile is only $2\frac{1}{2}$ cents.

Trailers becoming greater every month, every day the Fruehauf Agency is a more valuable asset.

The Fruehauf distributorship offers dealers a wonderful opportunity to "cash in" on the ever-increasing demand for efficient, economical haulage equipment.

And it has been thoroughly demonstrated that the Fruehauf Semi-Trailer is efficient and economical. It reduces transportation costs one-half to two-thirds. That is why some of the largest lumber companies, oil operators, fuel dealers and manufacturers are utilizing Fruehauf Trailers.

With our production doubled, our dealer organization will be enlarged during the next few weeks. Write for our dealer proposition.

FRUEHAUF TRAILER COMPANY
1302 Gratiot Avenue Detroit, Michigan



Simplex Four-In-One Combination Body

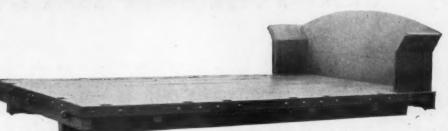
In the Four-In-One we offer a body that meets with instant favor because it combines four different types of bodies in one—dump, express, platform and stake—and thus meets almost every possible requirement or combination of them at the very minimum of cost.

The body and hoist complete weighs but little more than an ordinary express body, and the price is only a little higher, while the utility is far greater—hence the rapid sales.



Here is the Four-In-One as an express body. It has just as much room as the ordinary express body, the end gate hinging from the bottom for express use.

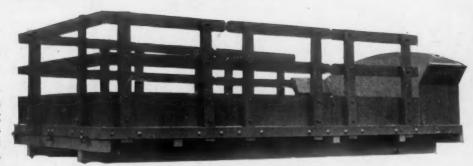
If a platform body is needed, the transformation is easily and quickly made by one man.



The sides of the body are removed, leaving this wide platform body ready for use.

If a stake body is desired, a set of stakes is quickly inserted in the platform body, and here you have a dandy stake body.

In addition to this convertible convenience there is our great hoist, occupying only 9 inches, giving a splendid dump body which can unload in forty seconds.



The Four-In-One Combination Body is a winner in every respect, meeting a strong demand, giving great value for the money and, consequently, is easily sold. We want to connect with live body-building concerns to handle our product in several territories still open. Write about it.



These illustrations show our exclusive two-way end gate which meets the requirements of both dump and express bodies.



The Simplex Mfg. Company, Conneautville, Pa.

Pierrenord

The Truck Industry's Chosen Standard

Eighty-nine motor truck manufacturers furnish Pierce Governors as regular equipment—over 50 per cent more than are using all other makes of governors combined.

"There's a Reason"

Pierce Governor Co. Anderson, Indiana, U.S.A.

NATIONAL NEEDS

When the nation called for ships, the vitally necessary tools and materials were hurried to the ship building front by motor trucks.

MACK Trucks, super strong, powerful, designed for heavy duty service, were drafted. Day and night, over long distances, on pavements and off, through mud and snow, MACK Trucks stood up under the most gruelling service. They set new efficiency and economy standards.

Many MACK Trucks have already travelled 300,000 miles and are still going strong. 50,000 miles with less than \$20 for repairs is another example of MACK Truck stamina and performance.

MACK capacities 1 to $7\frac{1}{2}$ tons, with trailers to 15 tons.

Write for catalogue and complete information.

INTERNATIONAL MOTOR COMPANY NEW YORK

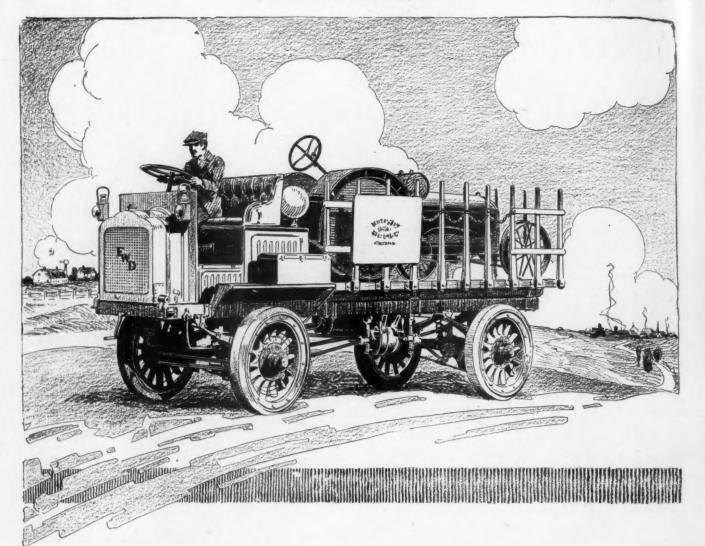
"PERFORMANCE COUNTS"

"Non-Gran will run hotter without scoring than any other bronze we have ever used. In fact, in our experience with Non-Gran we have never had a scored bearing."

THE original letter from which this excerpt is taken, bears the signature of a marine motor manufacturer whose opinion carries the weight of knowledge and experience.



American Bronze Corporation Berwyn Pennsylvania



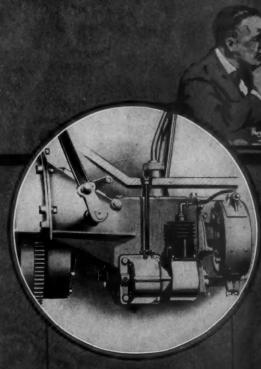
Any Road Any Load FWD Trucks

NO matter what the character of the load, up to its full tonnage capacity, and no matter what type of road, whether smooth, paved street or rough highway—whether hill or level country—the F-W-D Truck will deliver the goods most efficiently and economically.

There is power in all four wheels—every wheel is a driving wheel.

Our new catalog gives full details of construction and shows clearly how the four-wheel-drive principle is correctly and exclusively applied in F-W-D Trucks.

Four-Wheel-Drive Auto Co.
Department E Clintonville, Wis., U.S.A.



Regular Equipment With

For Every Car on This List we have a Kellogg Pump that fits like Standard Equipment.

CHANDLER
CHEVROLET
DODGE
FORD
HUDSON
NASH
OAKLAND
OLDSMOBILE
OVERLAND
REO

"JUST 'MIKE' THAT PISTON!"

"AFTER a year's continuous service it shows a wear of less than one-thousandth of an inch!

"ALL the other bearings have stood up equally well, and the efficiency of the whole Kellogg Pump is just as high as the day we put it on the car!"

MALIOCG FIRE DRIVEN FIRE PUID

GRINDING on emery wheels takes a little more time and trouble than turning on a lathe, but it insures clean, hard, smooth contact surfaces that have and retain the utmost accuracy.

ALL Kellogg parts are ground to exact measurements, which is just another of the many little manufacturing details that taken together produce the lasting efficiency of the Kellogg Pump.

Ninety per cent of all fully equipped cars carry Kellogg Pumps. Pneumatic-Tired Trucks are Kellogg-equipped. Over half a million motorists are Kellogg users.

KELLOGG MANUFACTURING COMPANY
Rochester
New York

XLES VORM Why Don't the

Fifth Avenue Buses Carry "Strap-Hangers"?

You can't board a Fifth Avenue Bus when all its seats are occupied.

Yet there is ample room in the aisle for a considerable number of "strap-hangers"—if they were allowed there.

And certainly the passengers would suffer no greater personal inconvenience than on a crowded street car or subway train.

The "Freight" is **Too Precious**

But the Fifth Avenue Bus is a truck, with a definite rated load capacity, so, as a simple business proposition, the company discourages overFor overloading is ALWAYS risky—dangerous. It can have serious—often fatal—consequences, to both load and truck.

What Overloading Can do to a Truck

Overloading cuts into the factor of safety, which is provided to resist the excessive strains of hill climbing, or short turns, or bad roads, of the many shocks and stresses encountered by trucks in their daily runs.

If your truck is overloaded when those strains occur, the reserve strength needed to resist them is GONE. Your load has absorbed it!

And then, without knowing it, you may start a little progressive fracture in the axle or some other vital part-and that means inevitable breakdown.

Such a risk is never worth while. The only safe thing to do—the only way to keep a good truck good—is to use a truck of a capacity suited to the demands made upon it.

Why the 5th Ave. Buses Are Sheldon-Equipped

Each 5th Ave. Bus travels about 40,000 miles in a year. The brakes are applied about 1,400,000 times in that period. There is constant stopping and starting, constant strains and shocks. There and starting, constant strains and shocks. There is NEED for the sturdiest, simplest, quietest and most efficient axle assembly obtainable. And that is why the 5th Ave. Buses use Sheldon Worm-Gear Axles.

Sheldon Axle & Spring Company

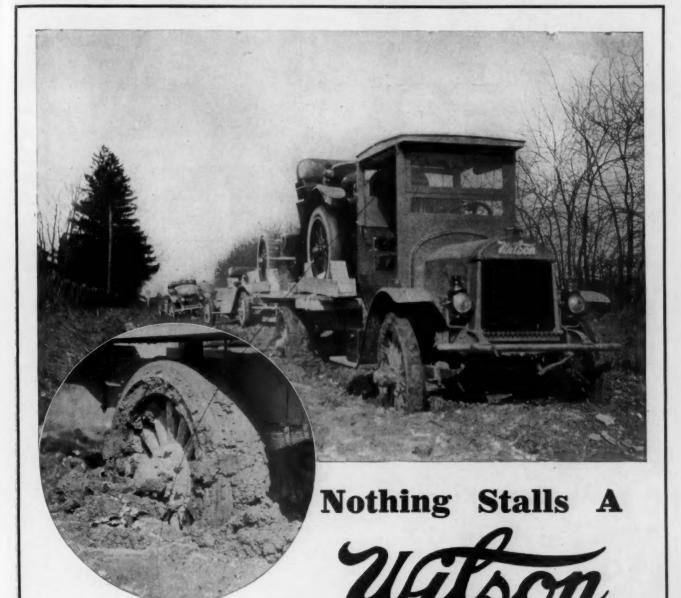
Makers of axles and springs for heavy-duty service for more than 50 years

WILKES-BARRE

PENNA.







Actual photographs showing what we believe to be the best part of the unpaved 15 mile stretch. A Two-Ton Wilson—carrying a One-Ton Wilson—on the celebrated stretch between Unity, Ohio, and Beaver Falls, Pennsylvania, known as the "war road" to the East coast.

Actual measurements of mud in other sections range from 16 to 18 inches in depth.

Seven fleets of Wilson Trucks have mastered this road without assistance of any kind and required no mechanical adjustments after completion of the 680 mile journey.

Wilson Trucks will solve your transportation problems.

J. C. WILSON COMPANY, DETROIT



If, along with the prices at the right, we could include the **specifications** of D-E Worm-Drive Trucks, the conclusions you would inevitably reach are these:

- (1) That no higher grade materials or better workmanship are put into any trucks at any price than are embodied in D-E Worm-Drive Trucks.
- (2) That they are several hundred dollars lower in price than any other worm-drive trucks of equal carrying capacity.

These are the conclusions that all dealers and buyers reach who are guided by specifications rather than by talk. The following is typical:

"Fred P. Colver, speaking for the Colt-Stratton Co., New York City, threw considerable light upon their selection of this truck. He stated, first, that while their investigation of the merits of the various trucks in the market had been most exhaustive and had covered a period of five months, there was no question in the mind of the Colt-Stratton Co. from the first that the ultimate decision would be the Day-Elder Truck. The specifications of Day-Elder Trucks speak for themselves."—NEW YORK SUN, Oct. 13th.

If you follow such a course, you cannot go wrong. Write or wire us for all the facts today.

DAY-ELDER MOTORS CORPORATION

Factory, Newark, New Jersey, U.S.A.

Five Models

Model A 3500 Pounds \$1775

Model B 4500 Pounds \$2075

Model C 7000 Pounds \$2750

Model D 5500 Pounds \$2150

Model E 14,000 Pounds \$4500

The above weights are the chassis carrying capacity of the various models, including weight of body.

8000

Guesswork vs. Facts

You need not depend upon impressions or opinions—your own or the other fellow's—to decide what source of ignition will give you the best service on tractor or truck or passenger car.

The superiority of the Eisemann Magneto is one of those demonstrated facts which are not open to argument.

Tests—competitive tests—tests under all conceivable conditions—tests conducted by ignition authorities of unquestionable standing—have proven conclusively the superior efficiency, dependability and durability of the Eisemann Magneto.

It is for this reason and no other that 126 manufacturers of motor vehicles—including practically all the recognized leaders who have established reputations to maintain—have adopted Eisemann Magnetos as standard equipment.



Sales and General Offices: 32-33d Street, Brooklyn, N. Y.

Chicago: 910 So. Michigan Ave.

Detroit: 85 Willis Ave., W.

Eisemann

Super-Construction

No. 7-The Impulse Starter Coupling

No. 7—The Impulse Starter Coupling
Two standard types of Eisemanni Magnetos, Types G4 and G84, can now be
equipped with a device which ensures a bot
spark for starting, regardless of cranking
speed. Without attempting here to explain the structural details of the Eisemann Impulse Starter Coupling, it may be
said that the intense spark at very low
speed is made possible by the automatic
compressing and releasing of a powerful
spiral spring which twists the armature
sharply, and thus causes the spark to occur
at the proper moment. The device engages automatically. Above 150 R.P.M.
it is drawn out of section. All working
the compression of the compression of the company
to the company of the company of the company
to the company of the device is neat and
compact, not larger than the ordinary
coupling.

For heavy trucks, tractors, marine en-





11TH YEAR







"I Know Where the Duplex is Every Minute of That 100-Mile Trip-It Never Fails"

ideal—planned for, inbuilt and evident in its 4-wheel drive construction.

The power to endure influenced Duplex design, dictated the materials and dominates its construction.

The power to endure has been proven in countless ways, in four seasons and on a thousand roads;

-in oil fields, in lumber camps, in mining districts;

-in snow and blizzards of the North, in mud and swamps of the South, in sand and gumbo of the West.

The power to endure has made the

The power to endure is a Duplex Duplex 4-Wheel Drive a supertruck; it has earned for the Duplex the premier position in Truckdom.

> The power to endure is claimed for all trucks. Many, no doubt, strive to embody it. In the Duplex it is real.

To Dealers: With production increased we are enlarging our distributor organization. A wonderful opportunity is offered aggressive, established dealers to become Duplex dealers. Write for our dealer proposition.

DUPLEX TRUCK COMPANY Lansing, Mich. 2028 Washington Ave.

With tire mileage greater— And fuel consumption less-Duplex cost per ton-mile is always lower



G 8 0 Constant of the second o

Designed and Built for Heavy Duty Service

to Meet INDUSTRIAL and MILITARY Truck Requirements

Square Fin Tubular and Diagonal Honey Comb Types

One Quality Only — the Best Send us Blueprints

The G & O Mfg. Co.
New Haven, Conn.



Giant Grip Non-Skid Chains

for Motor Grucks

are recognized as the most efficient anti-skid device for all_motor trucks and commercial cars. Giant Grip anti-skid equipment is drop-forged from special analysis steel, heat-treated and rust-proofed. Giant Grips insure positive truck traction and operating efficiency in mud, oil,

Equip with Giant Grip. There is a size for every make of truck wheel—square, round, oval or oblong spokes and for steel disc wheels.

CHALLONER COMPANY **OSHKOSH** WISCONSIN

Established 1863

No Tools Required-

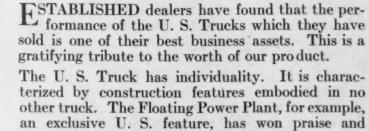
No Jacking Up of Truck

Dealers: Secure the Giant Grip Agency now—be ready for big winter business. Every truck operator in your locality is a logical prospect. Ask your jobber and write us now for territory, data, prices, etc.



U. S. Performance is a Dealer Asset







instantly to the buyer, too.

The U. S.'s selling franchise is worth money to the right kind of business man. Perhaps your territory is open. Write or wire for our proposition.

recognition from engineers the world over. It appeals



The United States Motor Truck Company



US MOTOR TRUCKS

Don't Let the Winter Storms Tie Up Your Shipping Schedules!

UNCLE SAM granted Letters Patent on Kissel's ALL-YEAR Cab because "it is highly desirable to have a motor truck cab that fully protects drivers during the cold, wet months, enabling them to keep their trucks in continuous service during the winter."

This winter, of all winters, calls for not only continuous but increased transportation. Maintaining schedules and meeting shipping dates in time and on time are essential.

Obstacles experienced during the past years must be overcome. Weather conditions must not be permitted to slow up America's industrial motor truck equipment. "Full speed ahead" is the nation's cry "over here" as well as "over there."

Kissel's weather-proof ALL-YEAR Cab—wind-proof, rain-proof and cold-proof—increases the personal efficiency of motor truck drivers and insures increased results for truck owners.

The ALL-YEAR Cab is exclusive with Kissel Trucks.

As a step to insure transportation certainty this winter

—see your nearest Kissel Truck dealer.

Kissel Motor Car Co.

Hartford, Wisconsin, U.S.A.

With the removal of the winter attachments—windshield, door, side and rear windows—the ALL-YEAR Cab becomes a cool, summer cab.

Kissels ALL-YEAR Cab

irability

ALMOST any kind of oil will lubricate to some extent at first. But the destructiveness of heat and friction soon reveals the difference between using a Quality Oil and others.

Inferior oil separates into patches, leaving bare metal surfaces to be scarred and burned. In short, it causes rapid deterioration of the engine and brings on trouble in a score of ways.



PERFECTION MOTOR OIL

is a Quality Oil. It gives not only better lubrication, but longer lubrication. It is refined from pure, selected. Pennsylvania crude petroleum of the highest grade, admittedly the best base for lubricating oils.

It is refined by processes which are the outgrowth of research and improvement extending over more than half a century.

It is refined by the Crew Levick Company, which controls the sources of its raw materials and maintains the most complete research and testing laboratories.

The uniform excellence of its products is guaranteed and backed by an established and highly-valued reputation more than half a century old.

Dealers will do well to get into immediate communication with the main offices to learn how they can handle this dependable quality line of lubricants.

> Don't wait; ask now about our interesting proposition. Your inquiries will receive careful consideration.

CREW LEVICK COMPANY

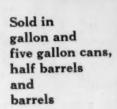
127 NORTH BROAD ST.

PHILADELPHIA, PA.

Subsidiary Cities Service Co.

One of the oldest and largest producers and refiners of oil and manufacturers of petroleum products

SAN FRANCISCO CHICAGO BRANCHES: NEW YORK BALTIMORE BOSTON SYRACUSE



CREW LEVICK



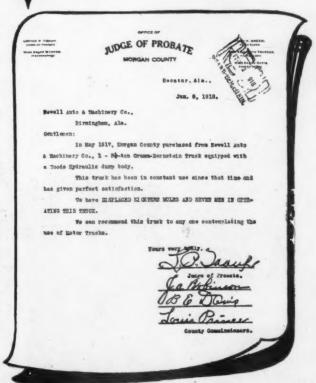
Displaced Seven Men and Eighteen Mules

That's the record of the Gramm-Bernstein 3½-ton truck owned by Morgan County, Alabama for use in road building.

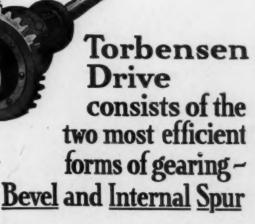
NOTE THEIR SATISFACTION

Their report, "This truck has been in constant use and has given perfect satisfaction" is characteristic of the service being obtained by Gramm-Bernstein owners everywhere.

For this continuous, satisfactory service is the inevitable result of the high engineering skill and the strict standard of material and workmanship of the Gramm-Bernstein organization.



THE GRAMM-BERNSTEIN MOTOR TRUCK COMPANY, LIMA, OHIO



THE Internal Gear is the most efficient form of gearing, owing to the fact that there is the closest approximation to rolling action between the teeth, thus avoiding the serious loss of engine power caused by the sliding friction of other forms of gearing.

Because of the absence of friction in the Torbensen internal gears, they will operate for a considerable time without lubrication, whereas other types of gears would be cut to pieces in a few minutes if improperly lubricated.

By making the principal speed reduction at the wheel, it is possible to use a small jackshaft and correspondingly small bearings, thus reducing friction to a minimum.

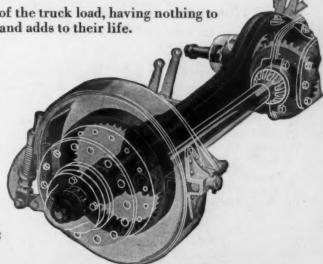
Torbensen driving members carry none of the truck load, having nothing to do but drive. This increases their efficiency and adds to their life.

A Torbensen Drive saves gas and oil by eliminating friction in gears and bearings; it saves tires by reducing unsprung weight; it saves on repairs and it lasts longer without replacement of parts. That is why far more Torbensen Rear Axles are in use than any other single type or make of rear truck axle.

THE TORBENSEN AXLE CO.

Cleveland, Ohio

Largest Builder in the World of Rear Axles



TORBENSEN INTERNAL GEAR DORIVE



A better wheel for motor trucks was needed. Fast, heavy-load hauling demonstrated that—and American resourcefulness was equal to the occasion. Thus, the Dayton Steel Wheel was born of necessity.

And now that the war has been won, Dayton has taken the wheel solution to the consumer—to every influence that bears on the sale of a motor truck, with a broad advertising campaign in the Nation's foremost advertising mediums—The Saturday Evening Post and The Literary Digest. Each month before this vast army of 10,000,000 readers, the story of wheel progress will be told—how the Dayton Steel Wheel meets the needs of the motor truck industry.

This dominant advertising is establishing the leadership for Dayton. It is creating a prestige and an acceptance by the consumer that adds to truck sales value—that makes it easier for the progressive manufacturer to meet the strenuous competition of the after-war period.

We can now make immediate delivery to truck manufacturers. Equip your truck with Dayton Wheels. Note how they add to the truck's appearance—how they answer any demand placed upon them.

Our engineering department will give you the fullest co-operation.

The Dayton Steel Foundry Co.

Main Office and Works, Dayton, O.

Chicago Cincinnati Dayton Steel Truck Wheels

Patented

Detroit New York



Mr. Dealer—Have You Tried The Boys' Working Reserve?

Of course you know that the "Boys' Working Reserve" is composed of high school boys who have registered under that department organized by the government.

These boys signify their desire to help out by working on farms or in other positions where, with a little training and instruction, they can fill places vacated by the draft.

They have done really wonderful work the past season—their quick, well-trained minds and flexible muscles make them superior to the average farm hand after a surprisingly short period of apprenticeship.

And they have that great quality you so greatly desire and so seldom find—Principle. And a sense of values.

One Maxwell dealer, at his wits ends to replace his garage men, tried boys of 16 to 17.

And he found them so much quicker, so much more intelligent and so apt to learn, he says they are now about the best repairmen he has ever had.

And, logically too, when you think of it-

At that age the average boy is a mechanical bug, and especially in the line of automobile mechanics.

And he hasn't acquired bad habits—if you tell him he should use an end wrench or a socket wrench instead of a pair of pliers, he is just as likely to believe you as not—and do it even when you are not looking!

You can take any fairly intelligent boy out of high school and under the draft age and make a good, dependable, efficient automobile repair man in fifteen days.

Just try it and you'll agree things might be a lot worse than they are.

Carry on!

Maxwell Motor Company, Inc.

Detroit, Michigan

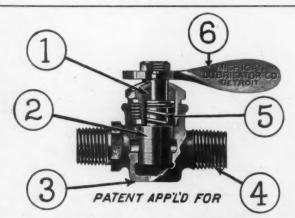




Michigan Motor Fittings "The Guaranteed Kind"









Kant-Leak Gasoline Cocks

are leak-proof

1. The stem is packed with an asbestos packing, which prevents any leaks at

2. The plug is ground to a glasslike finish,

3. The bottom is closed, and so there can

4. Standard connections furnished. See our circular for various sizes and styles

5. Stiff spring locks handle against turn-

6. Large, stamped brass handle turns

Write for Kant-Leak Circular

Michigan Lubricator Company

which insures a perfect seat.

that point.

be no leak there.

of connections.

quite easily.

ing from vibration.





















MA-44





















THE just pride of the Nash Motors Company in the reliability and efficiency of its products has been emphasized by the fact that since the very outset of America's participation in the war, these products hase contributed in value a large measure toward the fulfillment of the war accomplishment by our Government.

THAT motor transportation constitutes one of the greatest resources of the nation has been made so plain that it is now a matter of general recognition.

In these past months of emergency, highgrade trucks and passenger cars, by carrying materials and men quickly and at low cost, have proved beyond question that they are an essential part of the national transportation system.

Nash trucks and passenger cars had their part in this work and by their efficiency further enhanced their reputation as quality products.

Nash Passenger Cars—5-Passenger Car \$1490; 4-Passenger Roadster \$1490; 6-Passenger Sedan \$2250; 4-Passenger Coupe \$2250; 7-Passenger Car \$1640; Nash Trucks—One-Ton Capacity \$1650; Two-Ton Capacity \$2175; Nash Quad \$3250

The Nash Motors Company, Kenosha, Wisconsin

Manufacturers of Passenger Cars and Trucks, Including the Famous Nash Quad

The Nash Motors Limited, Toronto, Ont., Distributors of Nash Cars and Trucks for the Dominion of Canada

There will be no change in the prices of Nash Products before July 1, 1919

NASH MOTORS

VALUE CARS AT VOLUME PRICES

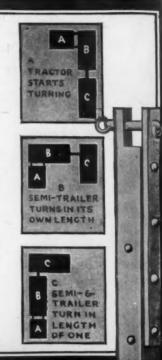
The Fifth Wheel

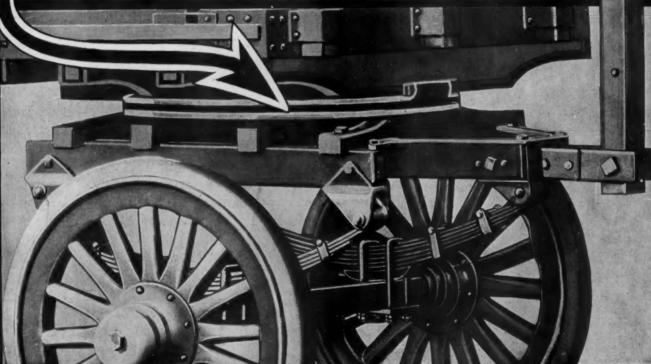
Flexibility—convenience and time saving in turning, to get in and out of difficult places quickly, without leaving road—all this goes to make Tractor and Trailer equipment Standard and Dependable.

The Watson fifth wheel on Watson Trailers and Semi-Trailers makes Watson haulage equipment as flexible as a motor truck. "Turns in its own length" tells a tremendously big story—too big to tell here. This fifth wheel eliminates bother with a double hitch. It makes trailers "track" with no danger of leaving the road on sharp turns.

If you're looking for a money-making opportunity, in a big, wide open field; if you want a standard product of unusual merit—get our proposition, how we help to establish you in a new fast-growing business.

Watson Wagon Company
46 West Center Street, Canastota, N. Y.





WATSON
UNIVERSAL SERVICE TRAILERS

A'Gîant" on Broadway



Silver Takes on Giant Trucks

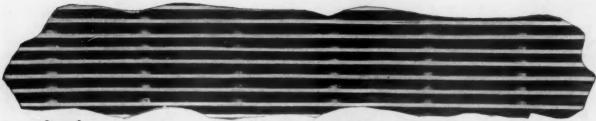
C. T. Silver, largest dealer in passenger cars in America, is now distributing Giant Trucks in New York City. It is significant that this big dealer has come to recognize the superior today's utility of the Giant, and indicates the trend of dealers toward a truck that is timely in its ability to answer the hauling needs of the day and to meet the present fuel exigencies.

Giant Trucks Reduce Fuel Cost 50%

Giant Trucks represent the industry's most momentous advancement, an exclusive feature, enabling them to attain full power on low-grade fuels; that relieves Giant owners of fuel dependence on gasoline. This is the day of the truck; it is a real necessity now. Giant Trucks are the season's biggest profit. Live dealers who want to increase their sales volume will act quickly. Giant Trucks are standardized throughout—Timken worm drive, Continental motor. Adaptable to every hauling requirement. Built in 1, 1½, 2 and 3½ ton models.

Territory is being closed rapidly. Write today for our liberal proposition to dealers

CHICAGO PNEUMATIC TOOL CO., 1031 Fisher Building, CHICAGO



Truck and Tractor Radiator Types

Jree air circulation as afforded by the continuous fin tubular radiator is of prime importance in radiator efficiency

In the continuous fin tubular radiator the maximum volume of cold air is forced over the finely distributed metal in order to absorb the greatest possible volume of the heat.

used than in any other form of radiator.

However, with this thinly distributed metal, there is no sacrifice of strength in the continuous fin tubular core. The "bracing" is so perfect that this type of core is stronger than any other and

consequently better adapted to heavy duty service.

This type of radiator excels in this regard because the passage

of the air is unimpeded and the tubes and fins are so thin that the heat is easily taken off.

The horizontal fins brace the tubes so securely that it is possible to use lighter tubes and fins than in other tubular types without sacrificing strength. Every part

does its full share of the cooling since the distribution of the metal is uniform over every cubic inch of the core.

This means that greater efficiency is secured from every ounce of metal The stress of a blow is distributed over the entire core. This means that a blow must actually break the radiator frame cast-

ings or penetrate the core to do any damage.

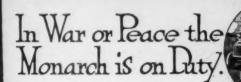
This concern has been manufacturing radiators of all types for all motor vehicles since the beginning of the motor car in-

dustry. Our knowledge of radiator construction is placed at the disposal of the manufacturers. That is the object of these discussions.

Mª CORD MANUFACTURING COMPANY, INC., DETROIT. MICHIGAN

limits the Speed and the Expense

ONARCH



HETHER it be on the shell torn roads of "Somewhere in France" or the less romantic mud and ruts of "Somewhere in America"—the Monarch Governor is "on duty"—regulating the speed and automatically meeting the changing conditions of load and grade.

Manufacturers of truck and tractors, who are building for the future, have come to know the dependable and consistent performance of the Monarch Governor under any and all conditions. In heat or cold, rain or shine it is always on the job.

Can you afford to overlook the offer we make you to investigate what we can do for you? Write us today.

MONARCH GOVERNOR CO



Look for the Red Seal Continental Motor— It Assures You a High-Grade Truck



America's Standard Truck Motor. Look for the Red Seal Nameplate

The Continental Red Seal motor enjoys the full confidence of truck and automobile buyers.

They know what this famous motor will do—know they can rely on it for power, for economy, for speed, for silence, for durability, for *every* motor quality. They look upon the Red Seal as a guarantee against motor experiments.

The most convincing evidence of what a motor will do, is the record of what it has done, and in this we find the reason why the public believes so implicitly in the Continental Red Seal motor. Fifteen years of successful performance in hundreds of thousands of trucks and cars provides sure evidence of its worth.

Striking endorsement of this confidence of the public in the Continental, is seen in the fact that today over 160 vehicle manufacturers use it in one or more models of their trucks and automobiles. Thus upon it they stake the success of their product and an investment of many millions of dollars.

When you buy a truck or automobile look for the Continental Red Seal on the motor—the mark of proved worth.

CONTINENTAL MOTORS CORPORATION

Offices: Detroit, Michigan Factories: Detroit—Muskegon

Largest Exclusive Motor Manufacturers in the World

Continental Motors

AMERICA'S STANDARD POWER FOR TRUCKS AND AUTOMOBILES

ONE-TON TRUCK ATTACHMENT FOR FORDS

NOT AN ASSEMBLED PROPOSITION

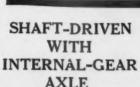
EVERYTHING BUILT IN OUR OWN FACTORY



MAKE
DELIVERIES
AND ASSURE
YOU PROMPT
SERVICE IN
PARTS

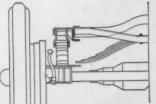
THIS IS WHY
WE CAN

THE PLANT BEHIND THE TRUCK









\$390

F.O.B. NEWARK, OHIO

NOTE the Auxiliary Spring Construction on the Jewett, which means many added years of service.

IT IS FIRST—FOREMOST STRONGEST—STURDIEST BEST THAT MONEY CAN BUY

WRITE OR WIRE FOR YOUR AGENCY TODAY

DEALERS:-Here is Your Chance to Clean Up

THE JEWETT TRUCK ATTACHMENT COMPANY NEWARK, OHIO

Traffic Truck 4.000 LBS. CAPACITY

Demonstration vs. Conversation

The performance of the "Traffic" in actual demonstration saves selling argument.

Dealers are not compelled to resort to a lot of talk to make "Traffic" sales. At first sight it conveys the greatest truck value ever offered.

There is no competition to overcome when presenting it. Besides possessing every demanded quality, the Traffic is the lowest priced 4,000 lb. capacity truck in the world.

Dealers who can qualify to represent a large successful organization are invited to wire us regarding their territory.

Some Traffic Features

Weight 3,300 lbs.; 4-cylinder, valve-in-head, 40 h.p. motor; Covert transmission; Borg & Beck disc clutch; Kingston magneto with impulse starter; 4-piece cast shell cellular type radiator; drop-forged front axle with Timken roller bearings; Russel rear axle, internal gear, roller bearings; semi-elliptic front and rear springs; 6-inch U-channel frame; Standard Fisk tires; 133-inch wheelbase; 122-inch length of frame behind driver's seat; oil cup lubricating system; chassis painted, striped and varnished; driver's seat and cushion regular equipment—and many other features for perfect performance.

Traffic Motor Truck Corporation





Look at the trucks used by Uncle Sam

Other truck owners have fleets of tens or hundreds. Uncle Sam's trucks are numbered by the thousands.

And of all the trucks in use, perhaps Uncle Sam's are subjected to the hardest service. Like the soldier they must be ready for any duty at all times.

Whether for mail or military, WOOD wheels have met Uncle Sam's most exacting requirements. They are strong, resilient and durable.

AUTOMOTIVE WOOD WHEEL MANUFACTURERS ASSOCIATION
105 NORTH 13th STREET PHILADELPHIA

NOTE THE WOOD WHEELS EVERYWHERE

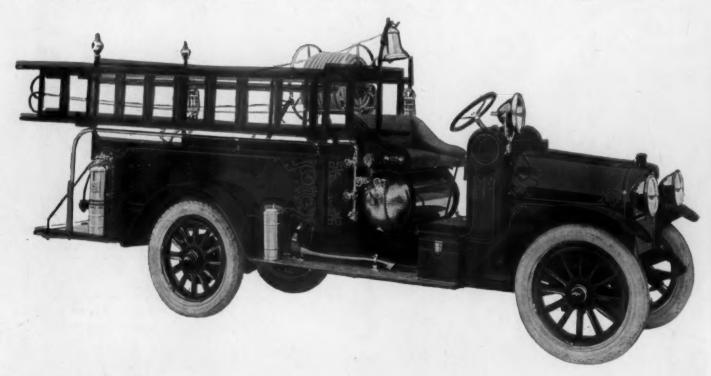


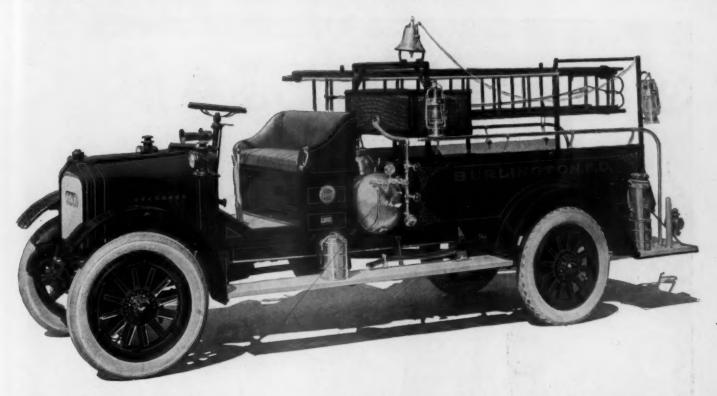
Big Profits for Auto Dealers Selling "Childs" Fire Apparatus

Take your own chassis, regardless of its make, mount a "Childs" fire apparatus on it, and supply your city with ample power, speed, service and convenience

—and at a big saving in price. You can mount it, or we will mount it and ship it to you complete, ready for service.

You make your profit on the chassis sale, plus another on the "Childs" apparatus.





These illustrations show a Ford and three other cars equipped with the "Childs" apparatus, now giving excellent service, saving their owners money on upkeep as well as on original cost.

When the U. S. War Dep't wanted fire-fighting equipment for its great buildings in France, and for the munitions plants here at home, it bought "Childs."

Your city may be in the market for fire apparatus now. Go after the business! Write TODAY for particulars.

O. J. Childs Company, Utica, N. Y.



COLUMBIAN

Lightning Hoist and Dump Beds Will Make the Delivery System

100% EFFICIENT





THIS is the most efficient, quickest and powerful hand hoist on the market. It fits ANY chassis and is mounted WITHOUT drilling holes into the frame.

Handles with ease loads from One to Five tons with but ONE man at the crank, and will raise the load to 50° in less than two minutes. Is light in weight, very compact in build. No expensive upkeep after being installed. No repairs—as it is fool-proof.

We also build DUMP BEDS for any style truck, any size and for any purpose; built to endure long and strenuous service.

Truck Dealers: Here is a ready seller. This hoist is equal in every way to a power hoist, with none of the latter's infirmities. Write today for illustrated folder and catalog No. 69.

Columbian Steel Tank Co. 1601-21 W. 12th Street Kansas City, Missouri

WILLING SERVICE

UNDER KILLING CONDITIONS

The New Stromberg Carburetor for Trucks does not develop weather weakness. Whether the thermometer simmers at 100 in the shade or shrivels to below zero, there is a smooth, unrestricted plunge of power—willing service—time saving service—money saving service—and under killing conditions. Now employed on 41% of all listed truck models. Write for descriptive matter and worth-knowing carburetor facts.

STROMBERG MOTOR DEVICES COMPANY, Dept. 1236, 64 E. 25th ST., CHICAGO, ILLINOIS



New STROMBERG Does it!



The nation needs every truck and passenger car in the country. Needs it to relieve the overburdened railway systems—to speed up every bit of essential work. A car in the repair shop now is worse than useless—it is a drag on quick, decisive victory.

Do your share towards keeping on the road the cars that come to you. See that the brakes are right, for they've got to be if the car is to run in safety. Suggest relining before the lack of it brings disaster.

Use Garco in every renewal job. Back your good workmanship with a lining that will give the utmost service. Garco is solidly woven from highest grade asbestos with every inch reinforced by hundreds of interwoven, fine, strong wires. Garco holds with the grip of a giant till the last shred is gone.

Your jobber can supply you. Ask him for prices—let him tell you about Garco Asbestos Products—necessities for every repair job.

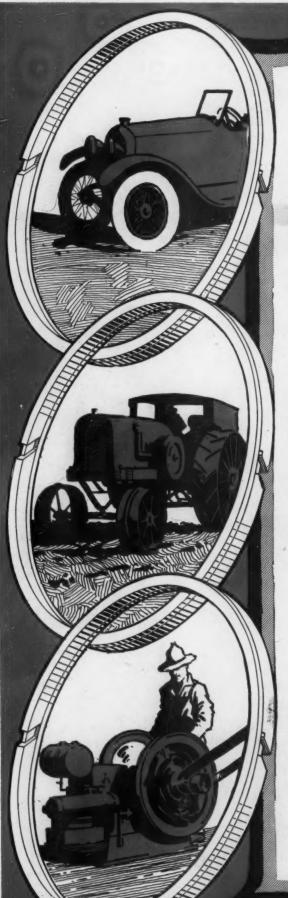
GENERAL ASBESTOS & RUBBER CO., MAIN OFFICES Charleston, S. C.

Branches and Complete Stock: 58 Warren Street, New York

311 Water Street, Pittsburgh

106 West Lake Street, Chicago





Immediate Service on Piston Rings

When your motor needs new piston rings you want to get them at once. You can't afford to let your trucks stand idle and delay deliveries, waiting for a set of rings to be made. That's when you need the prompt service given everywhere on

McQUAY-NORRIS LEAK-ROOF PISTON RINGS

All over the country we've placed complete assortments of all standard sizes. Your nearest dealer can get them for you quickly through his jobber or supply house. If the condition of the grooves of the cylinders require over-size rings, we have over 2000 unusual sizes and over-sizes—all widths and diameters—on hand at the factory ready for immediate shipment anywhere.

McQuay-Norris Piston Rings are the best and promptest answer when any power or carbon trouble develops due to faulty or worn piston rings. They save fuel and oil—reduce motor wear. Give better service and will outlast any other make of piston ring.

If you have Oil Trouble

—an oil-pumping motor that's wasteful and fouls spark plugs use one

Superey!

in the top groove of each piston. Made with a scientifically designed oil reservoir—allows perfect lubrication, without excess oil. Should always be used with McQuay-Norris LeawBoor Piston Ring equipment in lower grooves to get the best compression, most power and greatest operating economy.

Why Better Piston Rings Mean More Power and Economy.

Send for our booklet—"To Have and To Hold Power."

Clearly written—with diagrams—fully explaining the piston ring and power question. Every owner who desires greater efficiency and lower operating cost should read it. Judge for yourself which piston rings can be trusted out of sight in the vitals of your motor. Write Dept. C.

Manufactured by

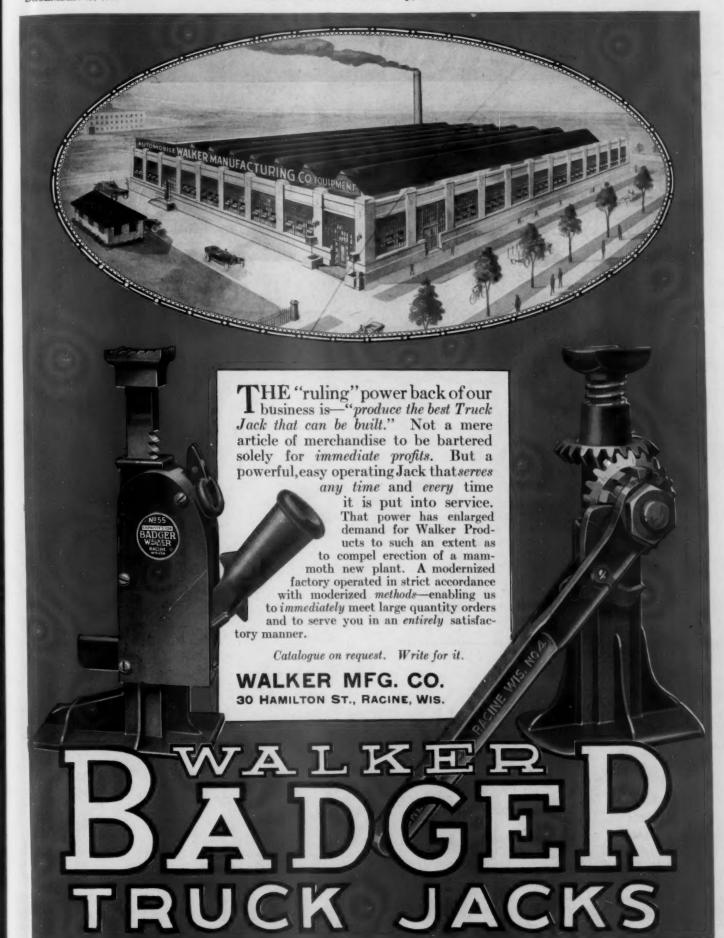
McQuay-Norris Mfg. Co., St. Louis, U. S. A.

BRANCH OFFICES:

New York Chicago Pittsburgh San Francisco Los Angeles Seattle Kansas City St. Paul Atlanta Dallas

Canadian Factory: W. H. Banfield & Sons, Ltd., 372 Pape Ave., Toronto





BESSEMER

Announcement The Rigelow-Willey Motor Company will hereafter control the distribution of Besserner Motor Trucks in this territory. Bigelow Willey Motor Co. Model C. 1 Ton. \$1450 Model M. 13 Ton. \$1950 From PHILADELPHIA PUBLIC **LEDGER** November 3, 1918

TRUCKS



\$2490

Another Big Distributor Takes on the BESSEMER TRUCK LINE

READ the announcement of the Bigelow-Willey Motor Co., of Philadelphia, reproduced on the opposite page. In it this large and progressive company tells why they have taken the distributorship for Bessemer Trucks in the Philadelphia territory.

These reasons are of profound interest to every dealer who wishes to take on a good selling truck line. The Bigelow-Willey investigation developed the same facts that you would find in a similar endeavor. Note particularly these facts:

The Bessemer was chosen after a thorough investigation of over a dozen leading makes.

It was chosen only with the greatest care and deliberation. In design and construction the Bessemer compared favorably with all other trucks on the market.

Prices were from \$300 to \$600 lower than the average for trucks of similar hauling capacity.

Bessemer trucks had been tested and proved in almost all lines of business.

The company was well established, strong financially, and could make prompt deliveries.

Out of ten makes considered long enough to get reports of service from owners, the Bessemer was the only one to come through with a 100% clean record, every owner written responding with praise.

These are facts which establish the worth of a truck far more than sheaves of arguments. We submit them for your consideration and invite you to make a similar investigation in your territory. If you are looking for a truck representation that offers splendid money-making opportunities—the Bessemer is the line for you. Write us and we'll place more concrete, convincing facts in your hand.

Here is the Line

Model G, 1 ton - - - \$1450 Model J, 2 ton - - - Model H, $1\frac{1}{2}$ ton - - - 1950 Model K, $3\frac{1}{2}$ ton - - -

Bessemer Motor Truck Co. Grove City Pennsylvania

STAND THE "POUND" OF THE ROADS AND HEAVIEST LOADS

HIGGINS Quality Springs for Trucks make ample provision for the terrific demands of motor truck transportation.

Crushing tonnage—ceaseless operation—roughest roads—wrenching sways—none of these weaken or wreck this vastly improved type of construction.

Virtually indestructible. No center hole. No center bolt. No center hump. No center breakage or danger of breakage in any section. Marvels of might, elasticity and endurance.

Months and years of **service** have proved their greater value—greater service strength—greater safety—and economy.

Send us specifications of your requirements and we'l gladly send you convincing evidence of Higgins superiority.

Higgins Spring & Axle Co.

Dept. 1219
Racine, Wisconsin

NO BOLT NO HOLE NO HUMP NO JOLT

FORD I-TON TRUCKS CALL FOR BABOOON BOODERS

Ford engineers have evolved a sturdy, close-coupled truck, amply powerful to haul its ton, but—where is that ton load to be carried?

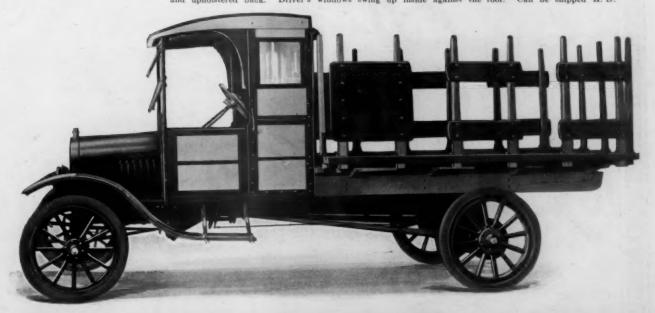
Unlike other trucks, the Ford frame stops short at the rear axle, with an available loading space of just 56 inches back of the seat.

What Kind of a Ton Can You Get on a 56 Inch Platform?

The average ton load requires a body not less than 8 feet long. Such a body on the Ford Truck has to carry an overhang of 40 inches *entirely self-supported*. Practically half the loading platform projects beyond the frame and half the load is carried on this rear projection.

Here again the steel construction found only in Babcock Bodies demonstrates its superiority, imparting the strength and rigidity in this case absolutely essential. Dealers are quick to realize that this patented steel construction makes Babcock Bodies the logical bodies for the Ford or any other truck. Send for our folder showing the four popular types of body specially designed for the Ford Truck.

This popular Cab Top Stake Truck is 96" long, 56" wide inside the stakes. It will carry the load and stand abuse. Equipment includes full length storm curtains and roll-up curtain at rear, full width spring cushion and upholstered back. Driver's windows swing up inside against the roof. Can be shipped K.D.



H.H.BABCOCK COMPANY
WATERTOWN. FOUNDED 1848 NEW YORK



N.J. Detlaff
President
N.J. Detlaff Company

nnounces that hereafter their complete plant will be devoted to the manufacture of clutches and control sets exclusively.

The building of these parts has comprised a considerable part of their work since the organization of the company in 1903. But a year ago the needs of the government led them to drop all commercial work and go on 100% war basis.

The necessity for this past, they are able to again supply the trade.

Quick Deliveries On Clutches and Control Sets

For fifteen years, the A. J. Detlaff Company has been known for their ability to get out good work, quickly.

Now, with added equipment and an organization trained particularly for this work, we are able to build quality clutches and control sets in quantities and maintain a rigid schedule of deliveries.

Because of the completeness of our equipment and the ownership of our own foundries, we are unusually free from dependence on outside sources of supply. This insures uninterrupted production for us and our customers.

We are ready now to take on additional business in this line, either for our standard units or quantity production of special designs, for either passenger cars or trucks.

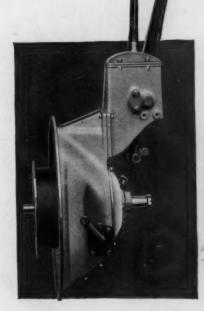
Write us for details.

A. J. Detlaff Company

124 Lafayette Blvd. East

Detroit - - - Michigan

We have now in production both AA and B clutches and B control sets. On these and similar sizes, we can give especially quick service.



ANNOUNCING

UNIVERSAL MULTI~SERVICE

BODIES



A Revolution in Body Building from the World's Largest Commercial Body Factory

For All Truck Chasses

1 Ton-1% Ton-2 Ton-2% Ton Capacity



Three Interchangeable Equipments on One Platform

THE Parry Manufacturing Company—the world's largest commercial body builders—announces the latest in truck bodies—the Parry Universal Multi-Service Body for all truck chasses.

Your choice of three styles of equipments—36" stakes for city draying—20" grain tight express sides for farm or city use—or 48" racks for hauling live stock—mounted on a strong and well designed platform. Where a convertible body is desired, these three equipments are quickly interchangeable as the needs require.

Parry "U.M.S." Bodies are shipped knock-down, which means—a saving in freight—in

warehouse space—in variety of stock carried. Easily set up and quickly mounted on your truck chassis. Standardization and large production guarantee—quantity—low cost—same day shipments.

Descriptive folders, specifications and prices are now ready for truck dealers. Your copy will be sent you by return mail, if you write to Department C to "Send the 'U.M.S.' folder."

PARRY MANUFACTURING CO. INDIANAPOLIS INDIANA



Push and Pull-EveryWheel a Worker

THAT is the way motor trucks must drive if they are to put the full power of the motor to work in carrying the load. On the Oshkosh 4-Wheel-Drive the motor pulls with the front wheels—pushes with the rear wheels—all four wheels are load-moving wheels where there's any traction at all, and either pair locks automatically when traction ceases, so that the full motive power is transmitted to the wheels that grip instead of being wasted in spinning.

OSHKOS

Oshkosh Drive System

Drive to the four wheels is through a Brown-Lipe 4-speed forward transmission to an Oshkosh sub-transmission (our own make) from which two interchangeable propeller shafts of equal length, one to front axle and one to rear axle, carry the power to the wheels.

Front and rear axle drive members are of the standard full-floating type.

Our own patented steering construction in the front axle gives easy steering with full power development.



Motor is Herschell-Spillman—3½ x 5—heavy-duty type for hard work. Equipped with Stewart Vacuum Feed and hung in three-point suspension.

Pneumatic Tires

A big feature is Goodyear-Cord pneumatic truck tires, 36 x 6. You can drive an Oshkosh Truck fully a third faster than any solid tired truck with far less vibration, and that means a big saving in repair bills and delivery time.

in all kinds of weather-under all road conditions.





The Easy Job Better-The Impossible Well

PRACTICALLY 100% transmission of motor power to the wheels is the reason for the performance value of the "Oshkosh 4-Wheel-Drive." There is a firm driving grip on the road at four points. Driving on only two wheels wastes approximately 20% of the motive power in road slippage on good roads. The Oshkosh 4-Wheel-Drive does the easy job better—on less gasoline, less oil, with less wear on tires, with greater safety, because skidding is reduced to a minimum, and at lower upkeep. It does the impossible job well, because it still has two working wheels when ordinary trucks stall.

Four Wheel Drive Ton Capacity A Complete Truck for User and Electric Light and Starter— Weather Cab, Standard

Electric Light and Starter—All-Weather Cab, Standard

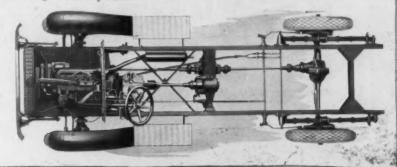
Oshkosh gives plus value by adding to the highcst quality in specifications the most complete equipment ever offered in a motor truck. Electric lighting and starting, not only a protection against broken arms and other accidents, but a big factor in more miles per gallon. Speedometer, motor-driven warning signal, extra rim for spare tire, all-weather cab, complete tool equipment, with heavyduty jack and tire pump.

TRUCK DEALERS —Here is a brand-new seller-a two-ton truck with all that means in gasoline economy of four-wheel drive; with all that means in excess power. A few de-sirable territories are open for quick action.

Oshkosh Motor Truck Mfg. Co. Oshkosh, Wisconsin

An All-Weather Worker

Drive your Oshkosh Truck this winter. Plow through the deep snow without stalling—without spinning your wheels—then in the spring do the same work in mud. Load your truck to capacity and if you occasionally have more than a two-ton load, hook on a trailer to carry the excess -the Oshkosh will pull it. This is the k unfailing service anywhere. This is the kind of truck quality that counts—the quality of



Obenberser

Concentration upon the creation of forgings, the setting of high standards for the work, rigid adherence to those standards and the giving of real service to buyers have been the most potent factors in Obenberger success.

When you place orders with us you can feel assured of high-grade products, accurately made, reasonably priced and promptly delivered.

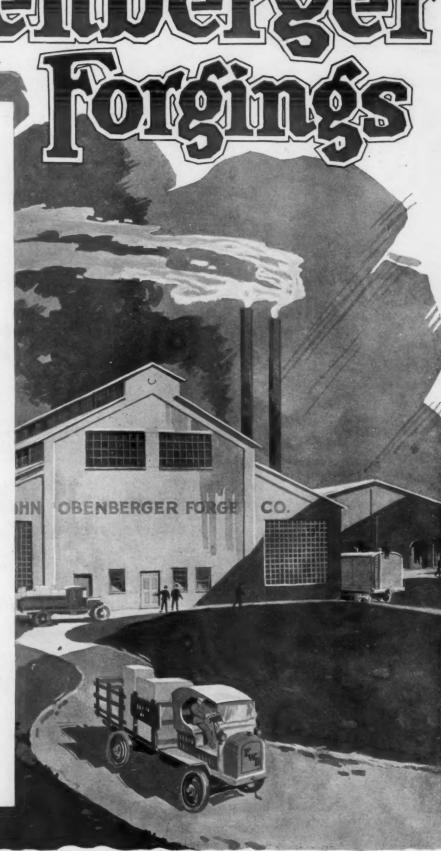
Your inquiries are invited on such drop forgings as Rocker Arms, Crank Shafts, Transmission Gears, Cam Shafts, Connecting Rods, Ignition Forgings, Valve Stems, Levers, Gear Blanks, Steering Knuckles, Hangers, Axle Parts, Motor Supports, Weldless Rings, Clutch Parts, etc.

We also make forgings hammered from billets. Either type can be procured smooth-forged, roughturned or finished complete, as desired.

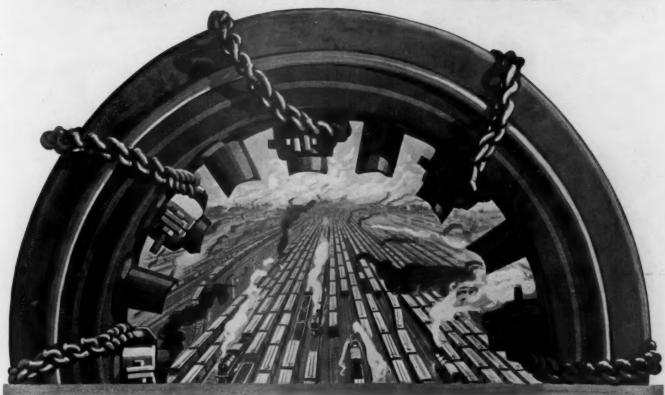
John Obenberger Forge Co. West Allis Wisconsin



THE MARK THAT STANDS







Visualize the equivalent of 500,000 loaded freight cars. This is the transportation burden that motor trucks will lift off the shoulders of American railroads this year.

Every truck engaged in this monumental task requires non-skid chains. They are not put on by the manufacturer. They should be put on by live dealers.

Arrow Grips are the best non-skid device for solid tire vehicles. A size for every truck of any type wheel.

Simplicity—Safety—Salability

Easy to put on, easier to remove. Truck drivers take kindly to Arrow Grips. They're so simple—no need to jack up the truck and its load to attach. See cuts.

There is still territory for live dealers. Wire today.

ARROW GRIP MANUFACTURING CO., Inc., Dept. F, Glens Falls, N. Y.

Chicago Distributing Depot, 617-19 Fulton Street

New York Distributing Depot, Arrow Specialty Co., Inc., 16 West 61st Street, New York Canadian Fairbanks-Morse Co., Ltd., 84-98 St. Antoine St., Montreal, Quebec





Ready, Now!

No great change in our equipment line-up was caused by the work we were privileged to do for war purposes.

We are immediately returning to the work of taking care of our normal customers.

Inquiries already at hand are indicative of early activity all

along the line of Peace-time manufacturing.

We offer those who look to us for their requirements, extensive resources, large facilities and valuable service, due to our fortunate manufacturing position, our own connections and the number and geographical location of our factories.

Standard Parts for Motor Cars, Trucks, Tractors, Airplanes, Motorcycles and Other Vehicles

Axles (dead rear) Axles, trailer **Bock Bearings** Hubs

Perfection Springs (regular and thin leaf) Perfection Heaters Stanweld Rims and Tubing

Other Stanweld Products

Rims-clincher detachable and demount-able for single and duel equipment

Clincher Rims

Detachable Rims for Wire Wheels, special

Millimeter Rims, all types

Rim Tools

Flanges and Fittings Solid Tire Demount-able equipment

Tire Bases in Demountable and pressed-on Channels

Brake Rod Assemblies, complete

Starting Cranks Electric Welding of

Parts **Exhaust Tubes**

Bands S. A. E. Formed Tubing

Forging for Convertible Trucks Ignition Wiring Tubes

Lamp Brackets Mast Sleeves

Oil Tubes

Radiator Rods

Starting Gear Rings and Boxes

Straight Steel Tubing Steering Gear Tubing

Tail Pipes

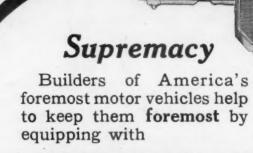
Torsion Tubes

Truss Rods

Tubing (straight and formed)

We also manufacture parts for Bicycles, Firearms, Carriages, Wagons and Special Purposes

The Standard Parts Company, Executive Offices: Cleveland, Ohio



FINDERS RADIATORS

For Trucks, Passenger Cars, Airplanes, Tractors

FEDDERS MFG. CO., Inc. Buffalo, New York

We can make deliveries now

WE are ready for peace, going full speed ahead, with the factory never busier. We will keep it going. Pierce-Arrow trucks are available to meet the peace emergency as they were available in the war emergency.

If you have transportation difficulties, come to us. We have served successfully 148 different lines of business, in which we met every condition

of service successfully. This includes your business—and your difficulties.

This is no time for experiments. Everyone wants means and methods which have been tested and tried and have proven equal to the need.

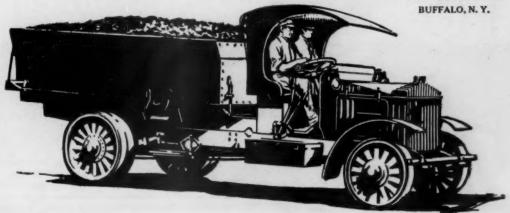
Pierce-Arrow trucks met every demand of the war and will meet every demand of peace.

PIERCE-ARROW

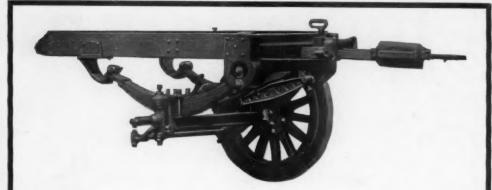
Delivers more work in a given time;
Loses less time on the job and off the job;
Costs less to operate and less to maintain;
Lasts longer, depreciates less and commands
a higher resale price at all times.



THE PIERCE-ARROW MOTOR CAR CO.



The Detroit is the Trailer to Sell!



It is no longer a question of whether trailers should be used (trailers have proved their value and economy beyond dispute), but **what** trailer should be bought. And the voice of practical experience answers—

THE DETROIT TRAILER

Made in $1\frac{1}{2}$ -3-5 and 7 ton capacities

It answers thus because actual service has shown the Detroit carries its load at an additional cost of but 10% to 15%, while other makes run up as high as 60% additional.

—because our double end steering device of original design makes it easy to back the trailer anywhere.

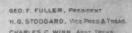
—because there is no sidesway, cutting down gasoline and tire costs. -because Detroit construction absorbs starting and stopping shock.

—because the Detroit is scientifically designed and carefully built for the specific purpose of giving the highest efficiency at the least cost.

These are some of the reasons why Detroit Trailers are being sold so fast; why dealers find the agency so profitable. Write us about your territory.

Detroit Trailer Co., Inc., 465 Stanley Ave., Detroit, Mich. Canadian Branch: Walkerville, Ont.







WESTERN OFFICE AND WORKS CLEVELAND, ONIO

GENERAL OFFICES AND WORCESTER WORKS

WYMAN-GORDON COMPANY

DROP FORGINGS

WORCESTER, MASSACHUSETTS Nov. 18, 1918

TO THE AUTOMOTIVE INDUSTRY:

It is freely acknowledged, and we think it is only fair and proper to emphasize it, that the Automotive Industry has been surpassed by none in whole hearted and efficient support of the great War which has come to such a glorious conclusion. Great plants were converted willingly and expeditiously to the production of needed War products. All honor to the Industry which in so few years has reached such a commanding place among the Industries of the Country!

The Government has had first call on the facilities of Wyman - Gordon Company, and we are proud of whatever contribution we have made to the winning of the War. It is particularly pleasing to us that practically our entire output was needed by our peace-time friends and customers in connection with their War contracts. Their requirements have at all times received preferential consideration, and we have thus been able to show in a substantial way our appreciation of the confidence their generous patronage of past years has indicated.

As we now approach the re-adjustment period, we look forward to the future of the Automotive Industry without the slightest fear. We believe its greatest prosperity is just ahead. Our own enlarged and improved facilities are dedicated to making this prophecy an accomplished fact. Guaranteed quality and service will be appreciated as never before. These we can assure our friends. Our facilities are as freely offered for experimental and research work as for quantity production.

Remember that our interests are mutual, and let us apply to our peace problems the lessons of cooperation that the great War has taught us.

Yours for a GREATER AMERICA,

1 Woddan

Vice Fresident & General Lanager

Wanted— Truck Parts and Accessories

The undersigned company is the purchasing representative of the

Fabrica Cubana de Automoviles y Camiones

(Cuban Automobile and Truck Works)

This company, capitalized at \$1,500,000 (of which over 75% has been paid in or subscribed for by prominent business men and a banking institution), is about to engage in the manufacture of a line of motor trucks of 34, 1, 2, 3 and 5 ton capacities.

As its American representative, we are desirous of hearing from makers of truck parts and accessories as to the quality and features of their products, ability to make quantity deliveries and prices. As quantity production is early contemplated, we desire this information at once.

Experts Wanted

The producing company has a good opening for one or more experts in connection with the production of these trucks. A good proposition will be made to right men. State qualifications and experience.

Address all communications to

Quaker City Supply Company, Inc.

Attention Mr. J. J. Polanco

126-128 South Front Street

Philadelphia, Pa.



Turning a Wheel by the Hub is like Turning an Axle by Gear Drive

NO man would think of attempting to get a load out of the mud by turning the hub of the wheel with his hands.

He takes hold near the rim. It gives him leverage. It makes his energy and weight count.

This same principle applies to truck and tractor drives.

Chain drives bring the application of power nearer the rim of the wheel. They exert greater driving power.

That's one reason why the largest percentage of heavy trucks are chain driven. And that's one

reason why chain drives are being adopted as the final drive for tractors. Other reasons are greater economy in operation; ease of repair; longer ultimate life, etc.

Twenty-two makes of tractors employ Link-Belt Roller Chain. There are definite reasons for this large Link-Belt choice. Our Book No. 359 gives some of them. One of our engineers will gladly call and give you complete chain drive facts and reasons.

LINK-BELT COMPANY

PHILADELPHIA CHICAGO INDIANAPOLIS

New York 299 Broadway Boston 49 Federal St. Pittsburgh 510 Park Bidg. St. Louis No. 201 Park Bidg. Denver Lindrooth, Subart & Co., Boston Bidg. Denver Lindrooth, Subart & Co., Boston Bidg. Minneapolis 418 S. Third St.

LINK-BELT ROLLER CHAIN

TRANSMISSIONS

REPRESENT

the highest type of engineering skill. They embody material, design and workmanship "character," which has made them a high reputation among leading manufacturers in the truck field.

Our recent plant additions, made necessary by the increased call on our facilities, has put us in position to take care of more production, and our good reputation for quick deliveries slands now—as always.

Fuller Transmissions are guarantees of perfect truck service in this particular.

Our engineering department stands ready to co-operate in the production of high-character trucks.

FULLER & SONS MFG. CO.

KALAMAZOO

MICHIGAN

DETROIT OFFICE

KRESGE BLDG.

The WHITE Heavy Duty Truck

with DOUBLE REDUCTION Gear Drive

Having all the leverage and flexibility of a chain and sprocket and the frictionless driving contact of gears which *roll* in oil, dust proof

Light Unsprung Weight · More Road Clearance Narrow Tread · High Leverage



THE WHITE COMPANY
Cleveland





says the Government to

Johns-Manville Fire Extinguishers

This means your jobber is stocking up with the Johns-Manville Fire Extinguisher and will take your orders for them now. By early Spring the business tide will be running full. The long-pent-up demand-freed at last-will gather momentum as it goes along and carry the demand for machines way beyond any previous high-water mark. Get ready for it-start now! Get your reservations in early-right away, so you can get your share of the business.

Through -

NE QUART F

and its allied products

In spite of high raw material costs the list price of the Johns-Manville Extinguisher has not been advanced.

Price \$10 \$10.50 West of the Rockies.

Brass or Nickel. Bracket included.

INSULATION

CEMENTS

ROOFINGS

PACKINGS

LININGS

FIRE PREVENTION PRODUCTS

ANVILLE

Johns-Manville Sales Policy

THIS resumption of selling will come as welcome news to the many dealers and jobbers in the field. It puts into active service again the Johns-Manville Sales Policy,

We sell only to the recognized jobber.

The jobber sells and stocks the retail dealer.

The margin allowed by the jobber to the dealer is liberal, even on small orders.

which for two years has built business friends, good will and profits

for the whole trade. It is timely to recall that Johns - Manville was the first to

recognize the jobber as the legitimate distributor—and to recognize the dealer as the natural agent of the jobber.

That such a plan is the right one—sound, as well as fair—has been proven over and over again during the last twenty-four months. A real opportunity is

offered to the trade not yet allied with this policy. We should like to make this

resumption of active selling the occasion of welcoming many new dealers into the Johns-Manville family.

Ask your jobber about the plan, and particularly about the protection it affords the small dealer.

H. W. JOHNS-MANVILLE CO. New York City 10 Factories — Branches in 63 Large Cities

Automotive Equipment



Uncle Sam is giving him a newer and better equipment, in mind and body-fitting him for a bigger, finer life

WHEN that boy of yours comes marching home a Victorious Crusader he will be a very different person from the lad you bravely sent away with a kiss, a tear and a smile.

He will be strong in body, quick and sure in action, alert and keen in mind, firm and resolute in character, calm and even-tempered.

Self-control and self-reliance ability to think and act in emergencies-coolness and courage in time of stress and danger-such will be the product of his training and experience.

Neatness, precision in detail without fuss and worry, promptness, reliability, scrupulous integrity, thoughtfulness and courtesy—these things come from army comradeship and discipline.

A broad-shouldered, deepchested, square-jawed YOUNG MAN with flashing eyes and a happy smile-that's who will throw himself into your arms when "Johnny Comes Marching Home Again."

That's who is coming back to live his life in happiness with you.

And in his hands—and yours lies the future of America.

Help him, keep him happy NOW -by cheerful, newsy letters-for your sake-and for Uncle Sam.

COMMITTEE ON PUBLIC INFORMATION, 8 Jackson Place, Washington, D. C.

GEORGE CREEL, Chairman THE SECRETARY OF STATE



THE SECRETARY OF WAR THE SECRETARY OF THE NAVY

U. S. Gow. Committee on Public Information

This space contributed by

THE COMMERCIAL CAR JOURNAL

"He Profits Most Who Serves Best

MATHER SPRINGS

Scientifically Heat-Treated

Unequalled for

Lightness, Flexibility and Endurance

Genuine made only by

THE MATHER SPRING COMPANY

Toledo, Obio



Hyatt Equipped Cars Can Be Trusted

The United States Mail service demands cars that can be trusted—cars qualified through the strength and stamina of every part to go the full route and arrive on time.

Important issues, involving vast sums and great decisions, depend upon each day's mail being delivered promptly.

And wherever the Mail Car goes—over city streets or on parcel post duty over rough country trails—be quite sure that Hyatt Roller Bearings are helping it stay on the job.

Self-oiling, self-cleaning, never needing adjustment, Hyatt Roller Bearings make cars run better, live longer and cost less. They are an essential part of cars that can be trusted.

Nine out of ten passenger cars, as well as the great majority of trucks and farm tractors, are Hyatt equipped.

HYATT ROLLER BEARING COMPANY

Motor Bearings Division, Detroit, Mich. Tractor Bearings Division, Chicago, Ill.

Industrial Bearings Division, New York, N. Y.



JAXON

What is the Ideal Cushion Against Shocks and Vibrations?

The ideal cushion against road shocks and vibrations is a combination of the resiliency of the pneumatic tire and the durability of the solid tire.

The Jaxon Full Floating Wheel—because of its method of suspension—may be rightly said to "float" the entire load on the resilient rubber cushions utilized in its design.

It is because of this full floating principle that the Jaxon Wheel so completely absorbs all radial, torque, and thrust shocks, and provides practically the resiliency of the pneumatic tire, yet even greater durability than the solid tire on any wheel now commonly used.

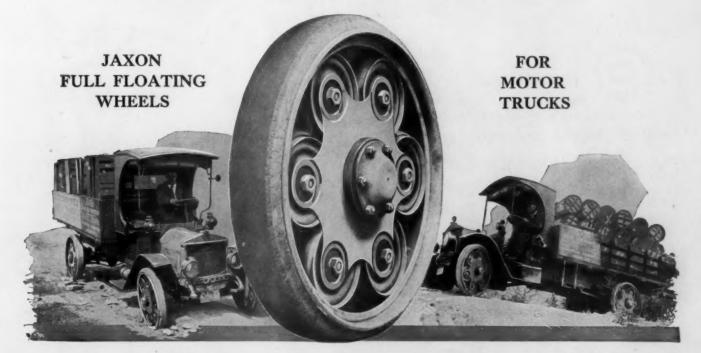
With Jaxon Full Floating Wheels solid rubber tires have a life of from nineteen to forty-one thousand miles. Wear and tear on goods being transported is practically eliminated. Gasoline mileage is increased from 24% to 36%.

And the truck can be driven at a greater speed without injury to itself or its load. To unusual economy is added a greater earning capacity.

The Jaxon Full Floating Wheel is entirely practical on every type of truck, and is easily applied to every design of axle—worm, internal gear and chain drive.

JAXON STEEL PRODUCTS COMPANY

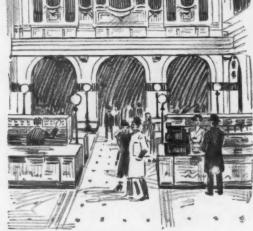
Wheel Department: 3066 West Grand Boulevard, Detroit, Mich.



John Wanamaker buys 100



The John Wanamaker Store, Philadelphia. One of the largest, one of the busiest, one of the most perfectly conducted department stores in the world.



The Grand Court in the John Wanamaker Store, Philadelphia. Thousands of merchants visit this arcade every year to see how business is being handled.

more National Cash Registers to meet the present-day shortage of help.

Mr. Wanamaker says:

"A large number of people have been taken out of the big stores. The men have enlisted. The women have gone into Red Cross work and nursing.

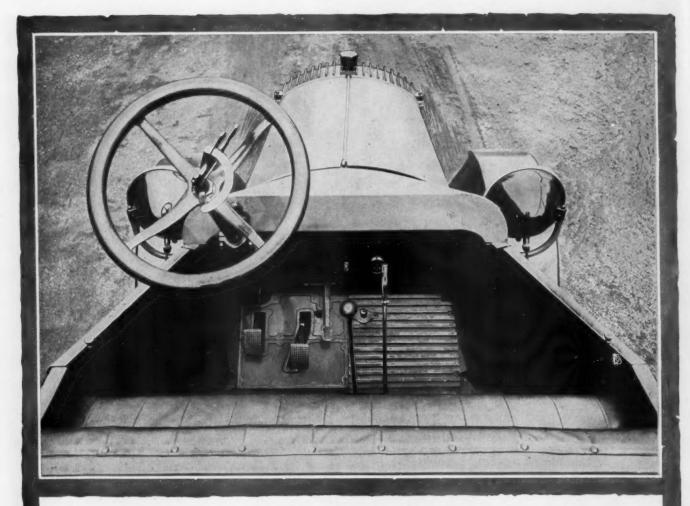
"We are able to fill some of their places with improved cash registers. This frees many persons for war work."

Mr. Wanamaker's statement that cash registers save labor, is based upon critical investigation and upon experience with N. C. R. Equipment extending over many years.

His recognition of the labor-saving qualities of modern National Cash Registers is plainly shown by a contract he has just placed for nearly \$100,000.00 worth of machines. This order calls for 100 of

our latest model clerk-wrap registers. It is the largest single order ever placed with us for one store.

The high character of Mr. Wanamaker's stores, the careful tests made by his executives, and the size of his orders, combine to make his personal endorsement extremely important to other merchants struggling with the present-day shortage of help.



Bethlehem Trucks Are Making Money for Dealers by Making Good for Owners

The road is clear for Bethlehem drivers and Bethlehem sellers—their trucks are first in carrying capacity—in standing up under overload—in delivering perfect service over all kinds of roads. Economy of upkeep and miles per gallon are Bethlehem selling helps. And the improved features such as Gray & Davis Electric Starting and Lighting make the Bethlehem Dealer Franchise an active, steady, money-making opportunity for one concern in a territory. Bethlehem dealers get the most powerful selling cooperation ever developed in the industry—the daily order sheets prove it. Find out if the opportunity is still open in your territory.

Bethlehem business is big business-sell the truck of "dependable delivery"!

\$1965

2½ Ton Chassis \$2365 F. O. B. ALLENTOWN 3½ Ton Chassis \$3465

The Motor Truck bought today without Electric Starting and Lighting will be out of date to-morrow Internal A Gear Drive

MOTOR TRUCKS

Dependable Delivery

BETHLEHEM MOTORS CORP'N. ALLENTOWN, PA.

The Motor Truck bought today without Electric Starting and Lighting will be out of date to-morrow



HOUSINGS our specialty.

Most improved machinemoulding, annealing and finishing equipment.

Separate department for housings.

Capacity one hundred full rear axle housings per day.

MICHIGAN

Michigan Steel Castings Company, Detroit, Michigan





Whether your requirements demand large or small bearings, our engineering department will help you in selecting the right type of bearing to secure the greatest

SERVICE

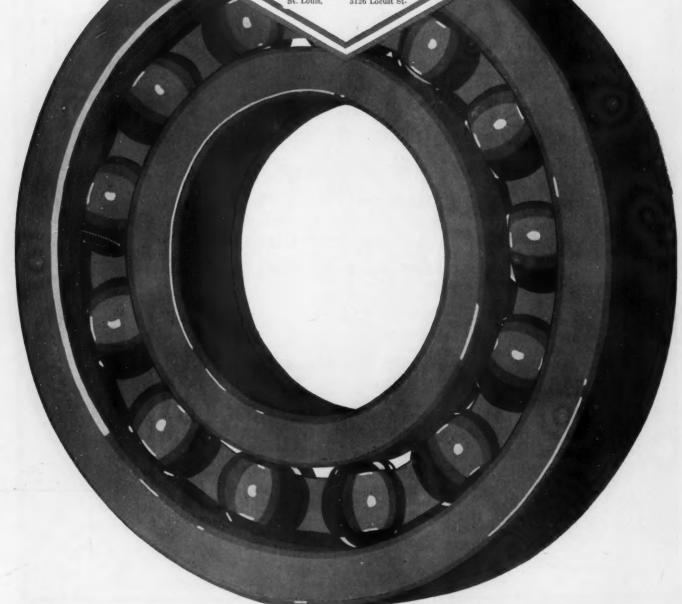
STANDARD ROLLER BEARING CO.

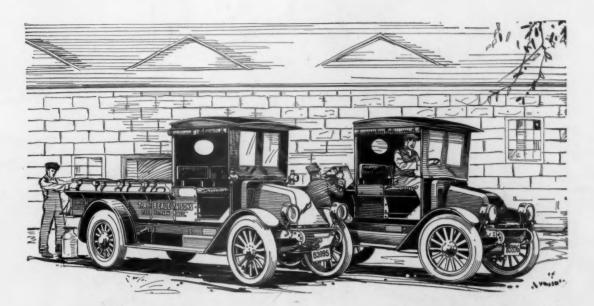
PHILADELPHIA, U. S. A.

SALES OFFICES:

Detroit, 936 Woodward Ave.
Chicago, 2206 S. Michigan Ave.
Indianapolis, 646 N. Meridian St.
New York City, 1737 Broadway
Boston, 159-AMassachusetts Ave.
Cleveland, 2062 Euclid Ave.
San Francisco, 41 Spear St.
St. Louis, 3126 Locust St.

Makers 'of SR B'Annular Ball Bearings, TaperRoller Bearings, Steel Balls and Rudge-Whitworth Wire Wheels.





Motor Truck Transportation A Dealer Opportunity!



BOUT 250 American cities have attained importance as merchandise distributing centers.

Clustered around these, at distances seldom exceeding a hundred miles, are 11,000 other cities and towns, each with its producing and distributing interests.

The success and prosperity of the farmers and manufacturers who produce, and of the merchants who distribute the vast amount of food stuff, live stock and merchandise originating in this country, depends upon the transportation facilities between these cities and towns. Those facilities, as you know, are badly cramped and congested except for the motor truck express routes which are now coming into service with extraordinary rapidity.

Motor truck express routes seem likely to remain as the normal condition in the future, because it is being conclusively shown that motor truck transportation for these short hauls, is far more comprehensive, more generally useful, more convenient, quicker and withal, more economical than either freight or express service.

This Company has branch houses in 90 of the 250 cities mentioned above. We have investigated the possibilities of highway transport lines. We are in an excellent position to judge of their probable permanency and present profit.

The information we have gathered is available to dealers interested in taking advantage of this great motor truck opportunity.

A letter or telegram from you will have our immediate attention

International Harvester Company of America

(Incorporated)

Chicago

USA



The GREATEST MOTHER in the WORLD

holds a sacred place of honor within our homes and in our hearts

THE message that the American people stand as one behind our brave boys and gallant Allies, is the most cheerful "Merry Christmas" we can send them.

Let us make this a Red Cross

Christmas—let us see to it that every member of every family joins the Red Cross. She is warming thousands, feeding thousands, healing thousands from her store—the Greatest Mother in the World.



All you need is a Heart and a Dollar

RED CROSS CHRISTMAS ROLL CALL

December 16-23



Centributed through Division of Advertising



U. S. Gov't Comm. on Public Information

This space contributed by

THE COMMERCIAL CAR JOURNAL

WHITE

Trundaar Tractor



Our Guarantee: Thermoid will make good—or WE WILL.

qualified to weigh the merits of brake lining.

Why Thermoid was selected There are three reasons why Thermoid

gives the maximum safety. It is also

used on the leading axles. The engineers

designing these axles are particularly well

has been selected by this critical body of competent judges.

1—Over 40% more material and 60% more labor are used in Thermoid than in any woven brake lining. This gives longer wear.

Thermoid Brake Inspection Chart

At speed of A car should stop in								
10 п	oiles	per	hr.	9.2	A.			
15	4.0	15	00	20.8	**			
20	3.5	2.6	48	37	89			
25	61	5.0	89.	58	45			
30	0=	99,	99	83.3	65			
35	118	88	10	104	44			
40	44	18	6.0	148	9.5			
50	**	0.0	6.0	231	**			

Will your car do this?

Every foot of Thermoid is protected by

Thermoid Rubber Company

Factory	and	Main	Offices:	Trenton,	N.	J.
				,		-

Factory Branches:

New York Chicago San Francisco Detroit Los Angeles Philadelphia Pittsburgh London Paris

Canadian Distributors:

The Canadian Fairbanks-Morse Company, Limited, Montreal

Branches in all principal Canadian cities







Makers of "Thermoid Crolide Compound Casings" and "Thermoid-Hardy Universal Joints"

Save the Thoughtless Dollars

"I got the sweetest hat today. And, my dear, of course, I didn't really need it, but—"

"What if it is only a few blocks? Here, taxi!"

"I know I'd feel a lot better if I ate less, but I simply must have a big order of—"

Over there in the Picardy mud, pock-marked with significant craters and "plum-caked" with unspeakable things that once were men, our soldiers can't hear all that some of us are saying. Good that they can't, isn't it? It wouldn't make it any easier to stand firm against those blood-crazed, grey hordes who come on wave after wave because they believe their Kaiser is "God's anointed shepherd of the German people."

It isn't that we Americans are a selfish people. We have simply been thoughtless.

Money is needed to win this war—let's give it. So far, we have been asked only to lend—to lend at a good round 4% interest. Turn your THOUGHTLESS dollars into War Savings Stamps.

NATIONAL WAR SAVINGS COMMITTEE, WASHINGTON

W.S.S.

WAR SAVINGS STAMPS
ISSUED BY THE
UNITED STATES
GOVERNMENT

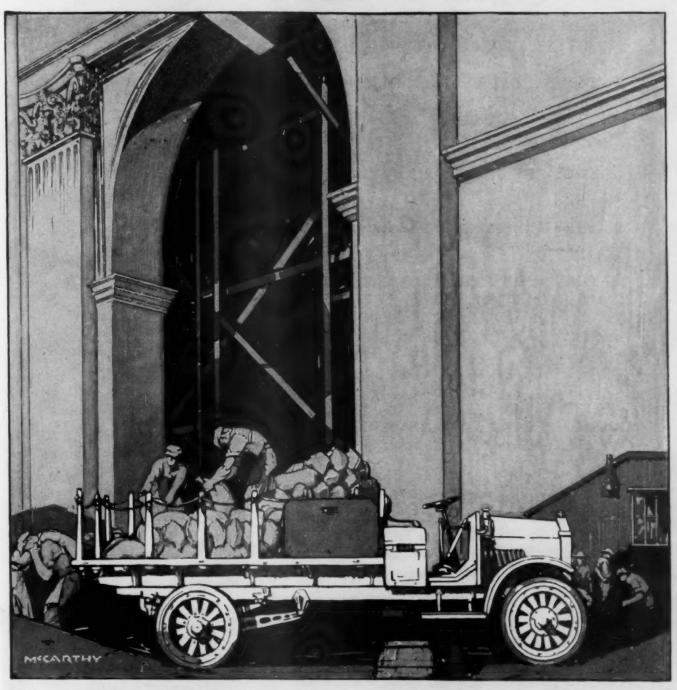
Contributed through Division of Advertising

United States Goo't, Comm. on Public Informations

This space contributed by

THE COMMERCIAL CAR JOURNAL

Selden Trucks



The use of the National Standard Truck Cost System will prove to motor truck and horse-drawn vehicle operators that because of the permanent service SELDEN TRUCKS have the stamina to render, they are the most economical to operate, and therefore the most profitable to install.

One to Five Ton Worm and Internal Drive Models. Write for full information.

SELDEN TRUCK SALES COMPANY

ROCHESTER, N. Y., U. S. A.

"COLD BLAST"

STEEL MOTOR TRUCK LAMPS

DIETZ "COLD BLAST" STEEL MOTOR TRUCK LAMPS ARE INCREASINGLY POPULAR, BECAUSE—

THEY ARE SUPERIOR LAMPS.

THEY ARE DEPENDABLE LAMPS.

THEY ARE SERVICEABLE UNDER THE EXACTING DUTIES THEY ARE REQUIRED TO PERFORM ON ACCOUNT OF PRESENT-DAY HEAVY-DUTY CONDITIONS.

THEY ARE BACKED BY A HOUSE WITH THE REPUTATION FOR MAKING GOOD LAMPS AND LANTERNS FOR THREE-QUARTERS OF A CENTURY.

THE "DIETZ" COMPLETE LINE IN-CLUDES SIDE AND TAIL LAMPS SUITABLE FOR MOTOR TRUCKS AND TRACTORS OF ALL SIZES. LET US ESTIMATE ON YOUR REQUIREMENTS FOR 1919.

CATALOG ON APPLICATION

R. E. DIETZ COMPANY SIXTY LAIGHT ST. NEW YORK, U. S. A.

James Barnes, Sales Agent Carter Bldg. Rochester, N. Y.

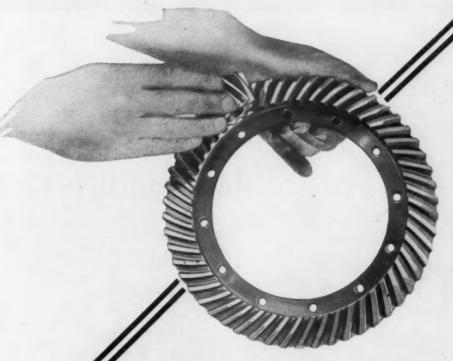


DIETZ
"CHAMPION" SIDE LAMP
WITH INSIDE FOUNT
FOR KEROSENE

FURNISHED WITH TWO SOCKETS TAKING ROUND BRACKET ONLY FOR USE WITH FORKED BRACKET $4^{1}\!/_{\!\!2}$ -INCH TO 6-INCH CENTERS



"ROYAL" TAIL LAMP
WITH INSIDE FOUNT
FOR KEROSENE
FURNISHED WITH
COMBINATION SOCKET
TAKING ROUND OR FLAT BRACKET



How smoothly they roll into mesh!

Friction, Noise and Wear—the three arch enemies of successful transmission of power through gearing—are reduced to the minimum in

BROWN-LIPE-CHAPIN

DIFFERENTIALS

They are perfect in design, materials and workmanship. Each individual part undergoes a series of constant inspections from the analysis of the steel to the testing of the finished product. The result is a mechanism that brings satisfaction to the car and truck manufacturer, and joy to the user.



Our engineering department will assist you in solving your differential problems. Write us today.

BROWN-LIPE-CHAPIN CO. DIFFERENTIALS

Syracuse

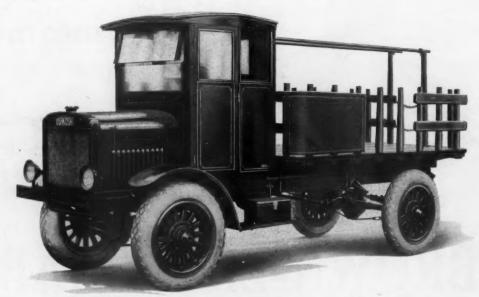
New York

Representatives:

San Francisco: A. H. Coates, 41 Speare Street Foreign Agent: Benjamin Whittaker, 2 Norfolk Street, Strand, London, W. C.



Attention of Truck Manufacturers



The enclosed cab and stake body shown above were designed by the J. L. Clark Manufacturing Company and are mounted on the Oshkosh Four-Wheel Drive Truck chassis.

We have remodeled our large carriage factory for the exclusive manufacturing of Bodies, Cabs, Seats, Seat Bases and rough forgings, for motor trucks. Send us your chassis drawings or blueprints, and we will design any of the above for your truck. If you have designs that you wish to continue, send us your blueprints and we will submit sample and prices. Our forty years of experience in high-grade vehicle manufacturing will insure the finest workmanship and best quality of material. A trial order will convince you.

J. L. Clark Manufacturing Co. Oshkosh, Wisconsin



A good name is rather to be chosen than great riches." The name DiamondT was first chosen and then established by unfailing service.



Diamond T Motor Car 4509 W. 26th St., Chicago

IN GAS-OIL-AND



In Construction

The tanks we build embody features of construction that insure rigidity, strength and life that will outlast the trucks and tractors they equip.

They Resist

All shocks, twists, strains and other forms of necessary abuse common in truck and tractor operation. The G. P. & F. manufacturing ideal expressed, is simply, "Not how cheaply can we build them but how strongly."



Geuder, Paeschke & Frey Co.

Canal Yards Milwaukee, Wis. Makers also of the Maxim Silencer

The Organization

Making these highgrade, substantially built tanks represents 37 years of ripe experience, careful study of conditions to be met as requirements of the automotive industry broaden, a plant covering over 15 acres of floor space, and an experienced personnel and equipment unequalled in its field.

Use Our Plant

Save your own floor space for your major operations. Use our tremendous facilities for right material selection, close tuying, rapid production and rigid inspection methods. You will save money and get better tank service than you could encompass in your own plant. Your specifications will be carefully carried out. You may rest on this statement. Send us your blueprints for estimate and PROOF.





Magnetos Kept 'Em Going

Those "Fighting Trucks" depended upon Magneto Ignition, because they knew they could depend upon it. Other service branches—tanks, airplanes, motorcycles, etc., also used Magneto Ignition.

Where there must be absolute dependability, the certainty of rip-roaring sparks all the time, there Bosch Magneto Ignition must be used.

The manufacturer who equips with Bosch Magneto, despite its slightly higher cost, proves the good faith of his service policy. He gives first consideration to efficiency and stanchness.

Be Satisfied

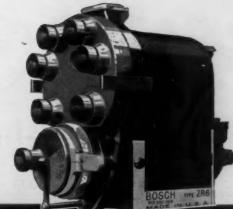
Specify Bosch

CORRESPONDENCE INVITED

BOSCH MAGNETO CO., 222 W. 46th St., New York

Works: Springfield, Mass. Branches: Chicago, Detroit, San Francisco

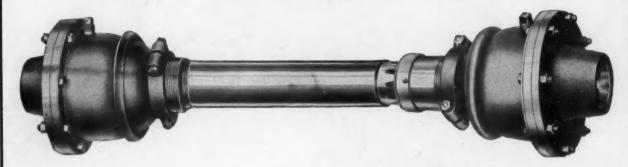
Service Stations in every State, 191 in all



AMERICA'S SUPREME IGNITION SYSTEM MOTOR TRUCKS - TRACTORS - AIRPLANES - MOTOR CARS - MOTOR BOATS - MOTORCYCLES - GAS ENGINES - ETC

KINSLER-BENNETT

Propeller-Shaft Assemblies



Now that the war is over, the industry soon can turn its attention toward building great fleets of trucks for inland commerce. The war has shown, as never before, the tremendous value of trucks for short-haul transportation. It has likewise shown the necessity of having dependable parts.

In the days to come, when you will need to put forth your best efforts to meet the new competition that will spring up, do not forget that the name Kinsler-Bennett stands for top-notch efficiency in propeller-shaft assemblies.

The words "Quality" and "Service" in our trade-mark are more than catchwords—they truly represent what you get when you place your orders here.

This is the time to consult our engineers on propellershaft assemblies for the new models you will soon be designing.



The Kinsler-Bennett Co., Inc.

The American Distributing Company, Detroit Factory Representative Kresge Building, Detroit, Michigan

Satisfied Service Everywhere

The Truck Manufacturer can't afford to take chances. The Distributor, Dealer and Owner haven't time to take chances. The demand for trucks is rapidly increasing—the tasks they are called on to perform, constantly greater. Tuthill Truck Springs for Standard Equipment and Replacements, provide super-strength equal to new-day demands.

Trucks will be overloaded—springs will wear and break-delays and costly repairs are saved by using Tuthill Truck Springs.

Tuthill Service extends from one end of the country to the other. Adjustments can always be made with utmost convenience and speed. Constant service is always obtainable and quickly rendered.

Sell your customers the springs that satisfy-with a service back of them that is ever ready-ready everywhere.

There is a Tuthill Spring for every truck-our Engineering Department is at your service to suggest the best spring for your need. WRITE TODAY.

Tuthill Spring Co.

760 Polk St.

Chicago, Ill.

"America's Most Successful Spring Builders"

Tuthill Spring' Service Covers the Country

Charlotte

Duluth

El Paso Evansville

Albany Hdw. & Iron Co.

Elyea-Austell Co.

& Mis. Co.

The Co.

Hand Co.

The Cameron & Barkley

House.

All Jobbers

The Ohio Rubber Co.

Cray Brothers

Griswold Sohl Co.

Fisk Company

S. T. & G. A. Gebhart Co.

Hering Motor Co.

Tuthill Spring Products

Co.

West'n Motor Sup. Co.

Co.
West'n Motor Sup. Co.
Orr Iron Co.
J. D. Grant
Cumings Brothers
D. W. Alderman, Jr.

TUTHILL DISTRIBUTORS

TUTHILL DISTRIBUTORS
Freano
Chandlor & Lyon Co.
Grand Rapids Sherwood Hail Co.
Hartford
Houston
Housto

Rochester Sidney B. Robey C. Salt Lake City Salt Lake Hdw. St. Louis Auto Devices Co. Jobbers)
San Antonio Fisk Co. of Texas

FOREIGN DISTRIBUTORS
Automobile Sundries Co., 18 Broadway, New York, N. Y.
Scott & Holladay, Ltd., 74 Broadway, New York, N. Y.

Chicks Stucks

If you exercise the same care and discrimination in selecting a truck line to sell that we do in choosing parts and materials for Available trucks—you will become a candidate for an Available dealership.

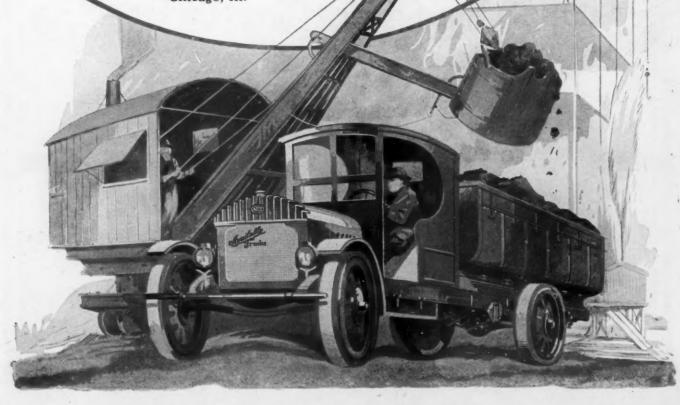
Every part used in the Available is there because of its demonstrated ability in producing the highest efficiency. Such names as Continental, Timken, Lavine, Brown-Lipe, Bosch, Stromberg and Spicer tell their own story of quality that inspires confidence in the buyer's mind.

The only kind of a truck that's worth handling is the one that serves so well as to bring the buyer back for more. That's the usual story of Available sales.

Our proposition is interesting to worthwhile dealers—suppose you send for it.

Available Truck Co.

1501-49 N. Kilpatrick Ave. Chicago, Ill.



This Patent Automatic Brake Absolutely Prevents Load Dropping if Driving Chain Should Break

This remarkable safety device is found only on

Mead-Morrison Winches

making them the only winches on the market adequately protected against accident.

No truck owner should install a Vertical Capstan Winch, or buy a winch-equipped truck, which does not have this protection. Experience has shown that the conventional ratchet and pawl is not dependable, and that the hoisted load occasionally will fall. At the best, such accidents are costly. Why take chances when they can be avoided by installing the standard Mead-Morrison Winch with its Patent Automatic Brake, which has been used for several years without ever dropping a load?

This brake is simple, effective and reliable. It is mechanically operated and is entirely automatic in action, positively preventing backward turning, so that if the driving chain should break the load could not fall.

Leaving aside all other features of Mead-Morrison superiority this one of safety should impel you to select a Mead-Morrison Winch for your truck.

Send for Pamphlet 121B

Mead-Morrison Mfg. Co.

East Boston, Mass.

New York Singer Building Chicago Monadnock Block





The truck of continuous service" ACCCAIP

Continental Motor Timken Axles Brown-Lipe Transmission

Ross Steering Gear Bosch Magneto Stromberg Carburetor

These six names inspire confidence in the quality of Maccar construction. Then consider, in addition, that these trucks are built in Scranton, Pa., one of the mountainous centers of America, and that every truck is given a most severe test over these rough mountain roads and must prove its power and strength there, under adverse conditions, before it is shipped.

Consider also that it is in this same region that the United States Government tests many of its army tanks, built to stand the very hardest kind of usage, and that the Maccar must make good over the same roads and under the same conditions.

Then you can understand why the Maccar stands up in the toughest service—it has proved its ability to stand the gaff before it left Scranton. Therefore Maccar dealers never worry about whether the Maccar will stand up in service—they know.

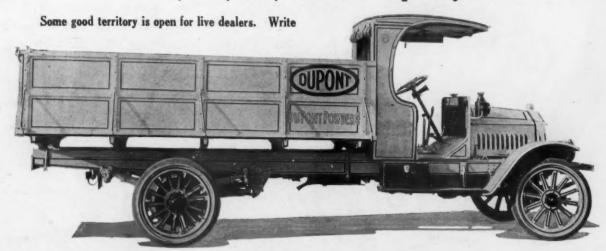
With Maccar specifications
With Maccar large castings
With Maccar heavy-duty motors

With Maccar unusually severe road tests

the Maccar dealer has a truck that he can sell on its ability to perform anywhere, any time and under any circumstances. That's the kind of truck with which you can make money.

We have one of the best equipped factories in the country and can make immediate deliveries of all these models.

1½, 2½, 3½, 5½ ton capacity

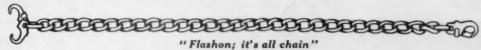


Maccar Truck Company, Scranton, Pa.

Flashon A Better Anti-Skid Chain

MOTOR trucks with solid tires can be kept running all the winter, if equipped with Flashon Anti-Skid Chains. This new device requires no spoke attachments and goes on in a jiffy with no need of tool or jack.

Single units, as shown here, are all there is to Flashon.



To attach a Flashon unit takes sixty seconds. Only three simple operations:

- 1. Throw the chain across the tire.
- 2. Pass one end between the spokes and lock the sister hooks into a link of the chain.
- 3. Pass the other end around spokes and lock hooks into chain.

The sister hooks lock by means of the Patented Flashon Interlocking Link—which locks and unlocks with a half turn and cannot come unfastened.

Flashon gives 100% perfect service. Dealers who carry Flashon give 100% anti-skid service. Write for booklet

Only nine sizes and they fit every make of motor truck

NATIONAL CHAIN CO., 30 East 42nd Street, NEW YORK

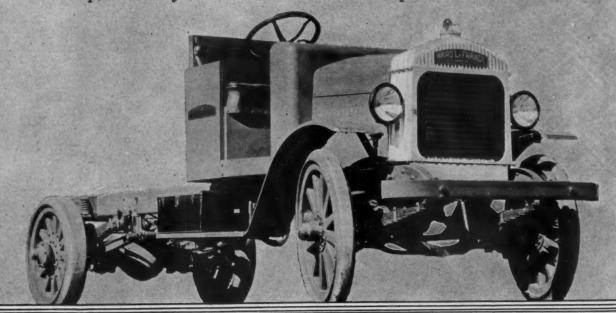
Manufacturers of all types of electrically welded steel chain and all types of ornamental chain



WARD LA FRANCE Super-duty TRUCKS

BUILT FOR MEN WHO KNOW

The Full-Flexible Frame, Automatic Chassis Lubrication, Heat Control Features, etc., places the Ward La France in the front rank of high grade motor trucks. Its large, continuously lubricated bearing surfaces at all minor points, positive cooling with air and water control, its general construction and equipment throughout, which includes Electric Lighting, appeals particularly to owners and drivers of experience.



WARD LA FRANCE TRUCK CO., Inc., Elmira, N. Y.



Australian experts approve the Berling

When experts 10,000 miles away say they find the Berling Magneto "worth more"—

—they merely confirm the opinion of the leading automotive engineers of America.

Wherever the Berling has gone—and more than 100,000 are giving satisfactory service throughout the world—engineers have approved the Berling.

ERICSSON MFG. CO. Buffalo, N. Y.

Berling Magneto Worth More Does More

We Helped to Bring the Hun to Terms



Wood Hydraulic Hoist & Body Company

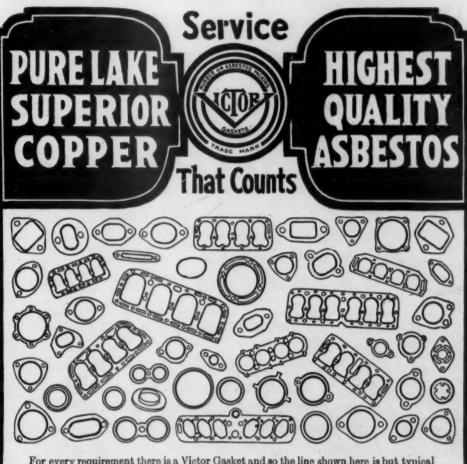
Manufacturers of

Hydraulic Dumping Units for Motor Trucks

NEW YORK

DETROIT

CHICAGO



For every requirement there is a Victor Gasket and so the line shown here is but typical of the wide range of varieties at your disposal at all times.

Our gaskets are in use as regular equipment on nearly every make of motors now in use, on automobiles, trucks and tractors—from the smallest to the largest.

Our materials consist of the highest-grade Lake Superior copper and best quality asbestos—and every large cylinder-head gasket used in recent types of motors with detachable heads, bears the Victor Trade-Mark, the brand of Service—Quality that counts.

Victor Gaskets in your repairs is one guarantee of a good job.

Increased demand has been imperative, and in order to maintain our reputation for prompt deliveries, we have recently completed a new fire-proof factory, which now enables us to handle all orders, large and small, with our regular promptness.

Write us your specifications today! Your inquiries are solicited! We give all business our personal attention!

ORDER NOW WHILE DELIVERIES ARE STILL POSSIBLE

VICTOR MFG. & GASKET CO., Troy and 21st Sts., Chicago, U. S. A.

WORLD'S LARGEST GASKET MANUFACTURERS

VICTOR GASKETS



This mark is a symbol of protection in the export business • • • •

It signifies-

that the selection of the product has been carefully made by automotive and export experts

American Manufacturers are protected because this mark will not appear on any but standard products of reliable makers and

Toreign Buyers are protected because this mark is a quarantee that the automobiles, trucks, tractors, parts and accessories bearing it are first class American products sold by an export house that is vitally interested in the welfare of its overseas customers

The plan upon which we conduct the export business differs greatly from the methods of the old-time commission houses, inasmuch as our interest in the buyer does not cease after the sale-is made.

American manufacturers with first-class products, ample capital and facilities, deserving permanent and satisfactory world-wide representation, are requested to call to investigate our organization.

Foreign buyers who want to be protected against loss thru purchase of inferior automobiles, trucks, tractors, parts and accessories made by unreliable companies, are invited to correspond.

AUTOMOTIVE PRODUCTS CORPORATION

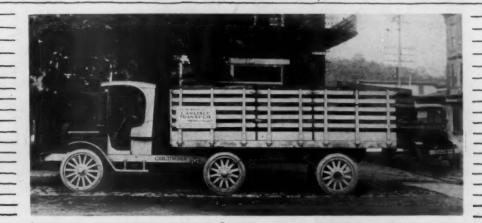
EXPORT SPECIALISTS TO THE AUTOMOTIVE INDUSTRY

WOOLWORTH BUILDING

NEW YORK, U.S.A.

TRACTOR-TRUCK AND SIX TON SEMI TRAILER

PRICE COMPLETE \$3250



HE above 6 ton combination hauled three hundred railroad ties, an actual net weight of 12,370 lbs., out of the woods—over the mountains of Pennsylvania and is repeating this sort of hauling every day—a feat thought impossible by lumbermen—and is doing it on the upkeep of a two-ton truck, and is not only doing it in the mountains of Pennsylvania, but all over the United States.

Does this actual performance mean anything to the lumbermen, or any other type of business where there is a heavy hauling proposition? Ask us to answer this question.

The purchase of a heavyduty truck involves:

> An excessive first cost. An excessive maintenance cost.

An excessive replacement cost (from wear or breakdown of expensive parts).

These costs are inevitable where motive power and load support are embodied in a single unit—where one assembly must bear the entire burden: not only pull the load, but carry it.

Columbia Motor Truck & Trailer Co.

Pontiac, Michigan





Crankshafts Carefully Forged



Properly Heat Treated

Accurately Machined



to your blueprints and specifications

AXLES



We specialize in the forging of both light and heavy axles and in the proper heat treatment of alloy and open hearth steels

SEND US YOUR INQUIRIES

ANDERSON FORGE AND MACHINE CO.
DETROIT, MICHIGAN

An Open Letter

Gentlemen:

I want to tell you what a noted truck engineer told me the other day.

He was talking fan belts in relation to heavy trucks.

"Trucks are hard on fan belts," he said. "There's more heat, more grease, and a full load on the engine most of the time. It takes a good fan belt to stand the gaff.

"We can't afford to have trouble with the cooling system, or have our trucks judged to be inefficient for lack of a good fan belt—and, primarily, that is why Gates Vulco-Cord Belts are standard equipment with us."

This engineer first specified Gates Vulco-Cord Belts two years ago, because they were made on the right principle and stood up to every test.

There are two outstanding features:

First: They are built to the pulley, so that all ten plies share the work equally.

Compare this with a belt that is made flat and then bent over the pulley. In the latter case the inside plies are compressed while the tension is all on the outer ply, which breaks first, of course.

Second: When a belt breaks it breaks straight across as it hinges over the pulley. Other belts are cut straight with the weave. The tension when on the pulley is all on one set of threads.

Gates Vulco-Cord Belts are cut on the bias. There are two sets of threads crossing each other diagonally in every ply. Warp and weave share the load equally. That means double strength, long service under all conditions.

It's all part of the famous patented "Vulco" process, and no other belt can be made that way. Gates Vulco-Cord Belts are guaranteed to outwear three ordinary belts—the best belt we have ever made—the very belt for truck service!

There are now over 4,000,000 Vulco-Cords in everyday service. There's one to meet your specifications—either flat or "V"—a belt that we'll guarantee to give you better satisfaction than you've ever had out of a belt before.

Yours for Quality in Service,



No. 1 shows a belt made flat. When bent over the pulley, all the strain is on the other ply. No. 2 shows the Vulco-Cord built on a curve. The load is shared equally by all the plies.





A fam belt breaks straight across as it hinges over the pulley. No. 1 shows a relicut straight with the fabric-one set of threads takes the load. No. 3 is a Vulco-Cord cut on the blas. This patented construction doubles the effective strength.



"World's Largest Makers of Fan Belts" J. H. Grary.

Manager of Sundries Department



OTOR vehicles have longer life because of the chrome alloy steels in New Departure Ball Bearings.

By reducing bearing wear, they minimize depreciation of shafts and gears.

They are frequently the last moving parts to wear out.

The New Departure Mfg. Co., Bristol, Conn. Detroit. Mich.

Conrad Fatent Licensee.



Competition Extends Down to Truck Costs

As business gets back to a competitive basis, so must truck operation.

You will have to compete in low-cost haulage, as well as in low-cost production—or merchandising.

No more than you could compete in business without cost records, can you compete in truck economy without mileage records—and an accurate, sturdy recorder like the





HUB ODOMETER

The Veeder tells you the distance traveled by a truck, as against its "traveling expenses." It reveals the mileage you get, and the mileage you ought to get, per gallon of gasolene, per pint of oil, per battery renewal, per dollar of upkeep cost.

The Veeder always ADDS mileage, whether truck runs forward or backward. Price, \$20. Ford Model, \$15. Ask for leaflet, "More About Odometers"

The Veeder Mfg. Co.

10 Sargeant Street

Hartford, Conn.

New York Distributor Joseph T. Quinlan 1777 Broadway

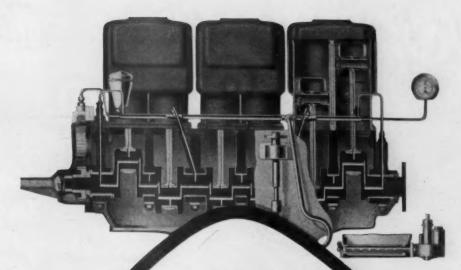
Detroit Distributors Geo. F. Balk Sales Co.

Chicago Distributors C. G. Wirick Co. 14 Alexandrine St., West 617-619 Fulton St.

Pacific Coast Distributors to Jobbers and Dealers F. Somers Peterson Co. 60 Pine St., San Francisco, Cal.

Pacific Coast Distributor to Automobile and Truck Mfrs. Alfred H. Coates 444 Market St., San Francisco, Cal.

Middle West Service Station: C. G. Wirick Co., Chicago



An Engine is No Stronger Than Its **Connecting Rods**

Consider the connecting rod—the link of power from cylinder to crankshaft.

No part of a modern gasoline engine is subjected to a greater strain, and a slight physical imperfection in the steel of which it is composed will bring about disaster.

A certain alloy steel may analyze perfect, that is the percentage of carbon, vanadium, etc., as the case may be, might be absolutely O.K.—and yet the steel would fall if its physical structure was not correct.

In "Agathon" standard alloy steel formulas we offer you steels that are physically as well as chemically right for each particular purpose.

Thus "Agathon" Connecting Rod, Type No. 24B, is the finest connecting rod steel obtainable.

And so with crankshaft, axles, drive shaft, etc.—there is an "Agathon" formula physically and chemically correct for each condition.

Write us now about your requirements,

THE CENTRAL STEEL COMPANY MASSILLON, OHIO

ALLOY STEELS Result of a Cold Test on a Connecting Rod forged from "Agathon" Special Connecting Rod Steel, Type 24B.

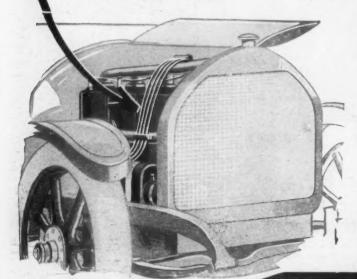
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The Remedy for Engine Trouble

"Engine trouble" is frequently only cable trouble. Unless the undiminished current is reaching the spark plugs, the engine cannot operate properly, of course-poorly insulated wiring allows the current to be diverted.



Motor cars, trucks, motor boats, of whatever size or type, are the better for being wired with Packard Cable.

Don't slight this most important link in your ignition, lighting and starting systems. Use Packard Cable and avoid "comebacks."

Write us today to send samples

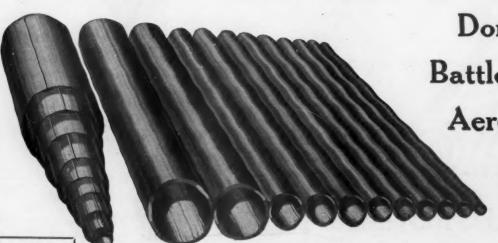
The <u>Packard</u> Electric Company

Warren, Ohio U. S. A.

District Offices:

Atlanta, Ga., 701 Healey Bldg., John E. Colley, Mgr. Chicago, III., 400 Lees Bldg., 19 S. Wells St., F. B. Duncan, Mgr. Dallas, Texas, Fred McGraw, Mgr. Detroit, Mich., Whitney Bldg., W. L. Marsh. Mgr. Kansas City, Mo., 419 Riatto Bldg., E. S. Davis, Mgr. San Francisco, Cal., 149 New Montgomery St., Paul Gardiner, Mgr. Seattle, Wash., L. C. Smith Bldg., R. E. Voorhees, Mgr.

RADIATOR TUBING OF DURABILITY



Dominant Battle Trucks

Aeroplanes

We number among our customers many of America's largest builders of tractors, trucks and automo-

Super-Cooling Efficiency

This Fin Tube type gives maxi-mum cooling ef-nciency per cubic inch of core and per pound of metal used, as it combines free circulation of air with the greatest exposed radiat-ing area.

The DALLAS Tubes are especially to be desired in truck and tractor radiator construction, on account of their strength. These tubes have no lap joints. They are either double lock joints or seamless, and will stand 100 pounds or more pressure. They give straight water circulation, which does not clog with alkali, dust or solder. Get the details.

Dallas Brass & Copper Company

223 North Jefferson Street

Chicago, Ill.

Fin Tube Radiators

They offer strength in the seamless, or double-locked double-locked 32 gauge (or heavier) metal, with few joints to loosen through vibration, and efficiency through straight free circulation.



COTTA **TRANSMISSIONS**

All Gears Always in Mesh



Assurance Dependable Service

The Cotta Transmission Co. Rockford, Ill.

TRIANGLE TR

11/2 and 2 Ton Models Dealers Write

We can make immediate deliveries. No delay. We have the trucks.

And the trucks are right. Every constructional unit is a sales feature—not usually found among specifications of trucks in the TRIANGLE price class.

Consider the importance of such names as Waukesha, Eisemann, Stromberg, Celfor, Fuller, Universal, Hyatt, Bower, SKF, Perfex, M. & S., Torbensen, Gemmer and Banker.

Add to these, features such as an unusually short turning radius, a service brake on the propeller shaft, and long, bronze-bushed springs.

You know you can sell such a truck. We can supply the trucks. Wire or write for full particulars and unusually attractive dealers' proposition.

Triangle Motor Truck Co. St. Johns, Michigan

Eastern Representatives:
Triangle Motor Sales Company 381 Fourth Ave., New York City







Will Your Car Stand the After-War Test?

Never again will the standard of efficiency of pre-war days suffice.

The war has taught us more than self-denial and supreme patriotism.

It has taught a new standard of efficiency.

Commercial car tests are becoming more severe.

The car that survives—that aspires to leadership—must pass a 100% test.

That will include Bushings and Bearings.

Bunting Finished Bronze Bushings and Bearings

are 100% efficient. They meet the most exacting demands. They are the utmost in Bronze Bushings and Bearings.

Send us Blueprints, Samples or Dimensions and let us quote

THE BUNTING BRASS & BRONZE COMPANY 744 Spencer Street Toledo, Ohio







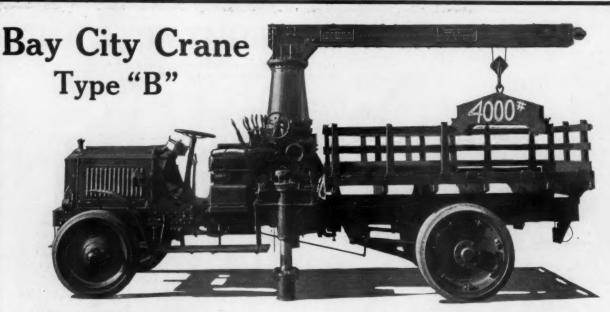
are made from carefully selected material, which constitutes the basis of their remarkable strength. All methods involved in their production combine to produce perfect, flawless joints of high character.

All parts are drop-forged, with case-hardened journals and bushings. In design, than with any other joint—a feature which will be appreciated, in view of the neglect often occurring in the care of joints which require frequent oiling.

Let us give you full details.

Write for the details

The Acme Universal Joint Manufacturing Company Kalamazoo, Michigan



The Bay City type "B" 2 ton power operated crane shown here, lifted 5800 pounds on a test at the factory at a radius of 7½ feet. This crane is designed and built for heavy and continuous duty.

This is only one of several types we build. Our line of winches and cranes for auto trucks meet all requirements.

Truck Dealers: Write for prices and liberal discounts.

Bay City Foundry & Machine Co.

Bay City, Michigan

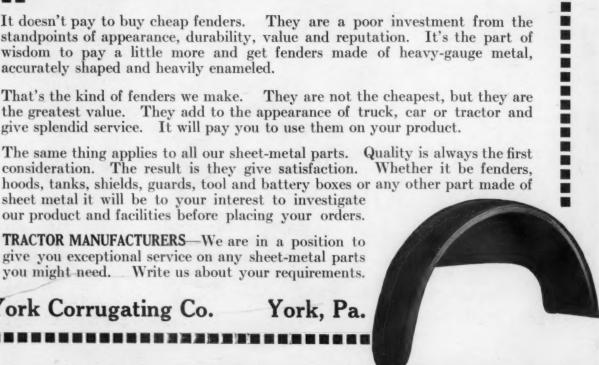
It doesn't pay to buy cheap fenders. They are a poor investment from the standpoints of appearance, durability, value and reputation. It's the part of wisdom to pay a little more and get fenders made of heavy-gauge metal, accurately shaped and heavily enameled.

That's the kind of fenders we make. They are not the cheapest, but they are the greatest value. They add to the appearance of truck, car or tractor and give splendid service. It will pay you to use them on your product.

The same thing applies to all our sheet-metal parts. Quality is always the first consideration. The result is they give satisfaction. Whether it be fenders, hoods, tanks, shields, guards, tool and battery boxes or any other part made of sheet metal it will be to your interest to investigate

TRACTOR MANUFACTURERS—We are in a position to give you exceptional service on any sheet-metal parts you might need. Write us about your requirements.

York Corrugating Co. York, Pa.





Standard

When a man of rich experience designs a truck to meet haulage conditions as they exist, and is so well satisfied with his truck that he backs it with his honored name and personal fortune, you can be satisfied it is a truck to stand hard service.

That man is Albert Fisher, the truck is the Standard.

Every unit and material in the Standard is there because of its ability to stand hard service. Each is the result of extended experience in the heavy haulage field. Each makes good and does its part in making the Standard a truck noted for the way it stands overload and abuse.

The reputation of the Standard as the truck for hard service has been a big factor in its sales success. It is a real business builder because it breeds repeat orders.

There is room in our organization for capable dealers who want to handle a line of permanence and profit. Write about territory.

A truck for every purpose. 2, 3½ and 5 ton models. They satisfied the Government.

Standard Motor Truck Company 315 to 327 Bellevue Ave. Detroit, Mich.

Rows

Worm Drive Trucks

The harder the job the Rowe is called upon to perform the greater is the satisfaction experienced by the buyer.

This is due to the inherent quality of construction and the superiority of design which make the Rowe more than equal to every task that could be required of a truck of its capacity. That is why the Rowe is found on so many jobs where conditions are regarded as being exceptionally difficult.

A truck like that is a good one to sell. It not only produces a profit and satisfies the buyer, but it also creates a prestige that is invaluable in securing new business and repeat orders.

The four models—2, $2\frac{1}{2}$, $3\frac{1}{2}$ and 5 tons—constitute a line that will meet nearly all trucking requirements. It's worth investigation on your part. Write.

Rowe Motor Mfg. Company

Lancaster Pennsylvania QUALITY



SERVICE

FRAMES

Trucks - Pleasure Cars - Tractors - Trailers also BRAKE DRUMS and Large Steel Stampings of every kind

The Parish & Bingham Co. Cleveland, Ohio













LEATHER PACKED





WIRE LOCK GREASE BOLT GREASE BOLT Fig. 111 Fig. 112











WING TOP RATCHET









AUBURN DIVISION

AUBURN, NEW YORK

SEND FOR CATALOGUE "F"





ENORMOUS strength and extreme accuracy are the essentials of satisfactory worm gears for motor trucks. Strength depends on materials and design—accuracy upon tools and workman-

WORM GEARS

ship. As the largest exclusive worm-gear manufacturers in the world we have been obliged to make the most extensive research and experiment of anybody in our field, and the results are embodied in a product which is everywhere accepted as the standard of quality.

Truck standards will continue to advance and 1919 specifications will show it. Now is a good time for the truck manufacturer who wants to be sure of worm-gear quality, to get in touch with us.

The Cleveland Worm Gear Co.

Cleveland

C. F. Quicke & Co. 315 Euston Road, London, England The Industrial Equipment Co.



The Factory—more than doubled in size and capacity. The skilled workmen in correspondingly increased numbers. The engineering staff larger than ever. Result: Production traveling abreast of heavy orders. Deliveries prompt as always.

The Products—Same carefully selected materials. Same Hartford correct design. Same careful turning out of finished products from raw steel to tested perfection.

"Hartford Cone Clutches and Universal Joints for big and little trucks." Write our engineering department. We co-operate.

Hartford Auto Parts Company.

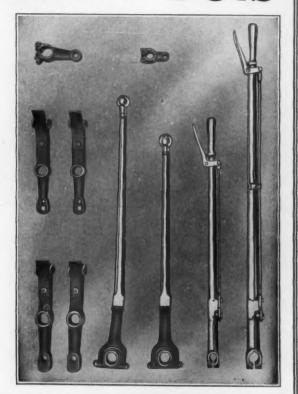
BATAVIA Control Sets



Drop-Forged Levers. Best workmanship. Assembled in many types of Base Castings. Suitable for 1 to 5 Ton Trucks.

Write for blueprint New 4-Speed Control.







Radiator Insurance

Sole Manufacturers

Rome, N. Y., U. S. A.

a Suggestion

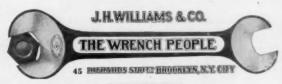
Williams' Superior Drop-Forged Wrenches

WHERE does your responsibility end? Do your wrench requisitions simply call for certain sizes of an unspecified design and make, or do you also demand quality—the quality that guarantees service?

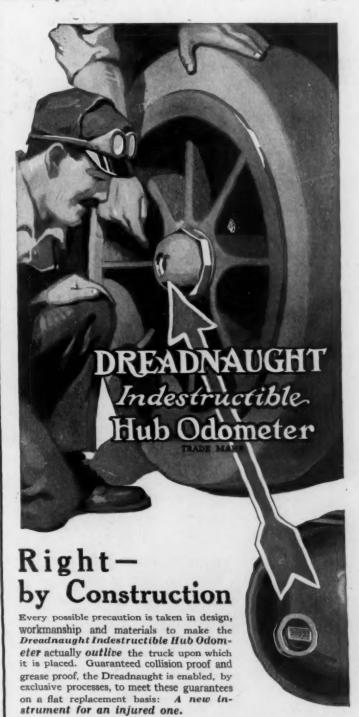
For nearly half a century we have been manufacturing wrenches, creating designs, standardizing lines to meet various trade needs, testing our materials and processes in the effort to develop quality; in short, striving by every means in our power to maintain and improve that Superior something in our product which makes it individual and Williams'.

That this constant endeavor has been successful and is appreciated is evidenced by the many shops which always specify "Williams' Wrenches"—they want and insist upon obtaining Superior quality. Try this plan the next time you order. Immediate delivery.

Booklet describing 40 Standard Lines is free



The A. G. Low Co., Ltd., 45 Pacific Ave., Saskatoon, Sask. Agents for Manitoba, Saskatchewan, Alberta and British Columbia



The Dreadnaught mileage record is flawlessly accurate. Its reading is always right side up. And Dreadnaught Service insures a continuously correct performance.

AMERICAN TAXIMETER COMPANY

16 West 61st St., New York
LOS ANGELES

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1424 Ninth Ave.
ST. LOUIS
5354 Geraldine Ave.
WASHINGTON
1231 20th St. N. W.
NEW ORLEANS
947 Howard Ave.
MILWAUKEE
197 Agden Ave.
HOUSTON, TEXAS



e don't need to buy those additional Cleaning Tanks"

"Oakite has increased the capacity of our old ones so that they now keep ahead of production.

"We were up against it for a long time in the cleaning room. Production was increasing all the time, and those old tanks simply couldn't stand the gait.

"But Oakite saved the day!

"It cleans so much faster than our old method that our same old tanks are now turning out the work easily."

Always get the advice of the Oakite man on any "cleaning" question

OAKITE
MANUFACTURED BY
OAKLEY CHEMICAL CO.
38 THAMES STREET- NEW YORK

Salesmen Wanted

We are being requested by Commercial Car Manufacturers to put them in touch with firstclass salesmen to establish dealers.

One company wants three men with headquarters in Chicago, Kansas City and Philadelphia.

Interested salesmen should write us at once, giving complete information. Address

Dept. of Co-operation

Chilton Company

Market and 49th Sts., Philadelphia

PUBLISHERS OF
Automobile Trade Journal
The Commercial Car Journal
Chilton Automobile Directory
Chilton Tractor Journal
Chilton Tractor Index

The Big Factor Is-THEY PAY





STRENGTH — sturdiness — dependability — day-after-day service at maximum loads and with minimum upkeep cost make Oneida Trucks pay the big returns that practically every Oneida owner enthusiastically reports.

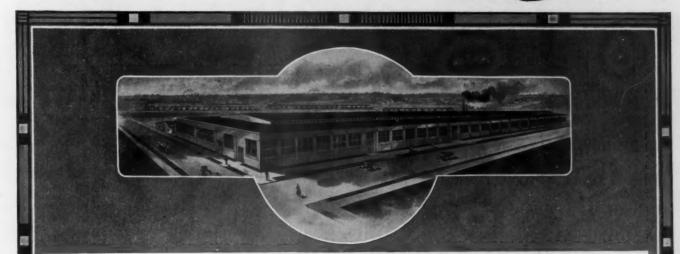
Oneida Trucks

answer every demand for either city or inter-city traffic. You'll see them everywhere except in the repair shop. Ask any Oneida owner for his record of ton-mile cost.

DEALERS: Write or wire. Your territory may still be open. Prompt Deliveries!

Oneida Motor Truck Company Dept. 312 Green Bay, Wis. 1, 1½, 2, 3½ and 5 ton Models. All Worm Drive.

V wee



Hoods Fenders Tanks Stampings
Sod Pans—For Trucks and Tractors
We Furnish Heavy Gauge, Acetylene Welded Tanks for Trucks
Ford Crown Fenders

Send Your Blue Prints for Quotations

Motors Metal Manufacturing Company
Detroit, Michigan

For 87 Types of Cylinder Heads



MAXWELL



DODGE



SAMSON



BUICK

all carried in stock and ready to ship to you for your repair jobs

There are Never-Leak Gaskets here for the big majority of requirements, and repairmen who carry them not only make the best engine set-ups, but also make more money because these gaskets cost less than others.

Truck service is growing heavier and harder each day. Repair jobs are com-ing faster. Do the best work and make the most money by stocking up on

Give the owners 100% pure service. They demand it, and they will stick to you when you render it.

Order now—for the money and satisfaction there is in it.

We carry this big stock of truck gaskets (also a large line of passenger car gaskets) to give you quick service. If we don't have what you want, we'll make it, quickly.

The Fitzgerald Mfg. Co. Torrington, Connecticut



OVERLAND



REPUBLIC





★ ministrum sunnistrum DU PONT AMERICAN INDUSTRIES Entroperation sunnistrum (**)

auto trimmers,

ATTENTION!

-next year's model will be this year's car renewed.-you will be flooded with orders for new tops, curtains and cushions needed to make the millions of used cars sightly and serviceable.—your customers will ask for the best-



RAYNTITE for New Tops and Curtains **MOTOR QUALITY for New Cushions and Trim**

-prepare to meet the demand for these popular, handsome, dependable and guaranteed materials. —an order placed now may save disappointment later.

DU PONT FABRIKOID COMPANY

Wilmington, Del.

New Toronto, Can.



\$10,204.40 Earned

A truck that will earn \$10,204.40 in less than 2 years for its owner, is certainly rendering service plus profit. Such a truck is the Acme.

Read Mr. Hartman's short but valuable letter of Acme accomplishment printed below, and then frankly ask yourself whether you can longer ignore the profit possibilities that a truck like Acme holds for you.

The Secret Lies in Acme Proved Units

for Acme combines all the units which are provedwhich the engineering world recognizes as supremeunits which you, yourself, would demand in a truck for your own use.

> That means superior service, lowest upkeep and operating costs-greater earning power.

Acme dealers have the opportunity of a life time, now. National Acme advertising plus thousands of satisfied customers like Mr. Hartman, mean quick sales and bigger profits. Get our attractive, liberal dealer proposition.

Built in 1 to 5 ton models Oversize in capacity and dimensions

ACME MOTOR TRUCK CO. Cadillac, Michigan

294 Mitchell St.

Acme Proved Units
Continental Red Seal Motor
Timken Axies
Timken Bearings
Timken-Detroit Worm Drive
Bearings
Timken-Detroit Worm Drive
Bearing Sear
Blood Bros. Universal Joints
Detroit Springs
Artillery Type Wheels
Elseman High Tension Magneto
Rayfield Carburetor
Stewart Vacuum Feed
Tubular Type Truck Radiator
Centrifugal Type Governor

PROOF

PROOF
H. A. HARTMAN
Moving and Transfer
Steelton, Pa., October 16, 1918
Acme Motor Truck Company,
Cadillac, Michigan.
Gentlemen:
I purchased my Acme truck
November 27th, 1916, and up to
the present time it has earned
me \$10,204.40 gross money.

me \$10,204.40 gross money. For repairs I have spent only \$75.00 and it runs as quiet almost as the day I bought it. It does not rattle at the rear, like I hear so many trucks do when they pass by. (Signed) H.A. Hartman.



RETURN LOADS WILL CUT YOUR HAULAGE COSTS



STOPS ALL LEAKS

in Radiator or Cooling System in 5 to 10 Minutes

RADIATOR

"Look for the Sunburst on the Can"

Safeguard your truck against delay due to leaks in cooling system. Have a can of marvelous, liquid Radiator Neverleak handy to pour in the water in

the radiator when leaks occur. In 5 to 10 minutes all leaks have stopped and you are on your way.

Think of the convenience, the saving in time and saving of expensive repair bills! Radiator Neverleak is guaranteed satisfactory and will not injure or clog the cooling system.

DEALERS: Urge every truck owner to carry Radiator Neverleak on every truck. It's a profitable, fast-selling side line. Retails at 75c a can, and your profit is 35%.

Let us hear from you

BUFFALO SPECIALTY CO. 356 Ellicott St., Buffalo, N.Y.

"The LIQUID VENEER People"





Easy Starting in Cold Weather is a Good Test of a Magneto

No matter how cold the weather or how slow the motor is turned over, there is a K-W Magneto that will start your truck engine EASILY and IMMEDIATELY and give continuous, efficient, no-trouble ignition. No Batteries, No Starting Coils, No Timers and No Self-Starters are necessary, regardless of how high the compression of the engine.

The K-W Impulse Starter used in connection with the



has stood the test of time. It makes the starting of the largest size motors as easy as the smaller ones. This device holds back the shaft or rotor of the magneto until the firing point of the engine is reached; when it is tripped and by means of a powerful spring is driven ahead at a rapid rate. This produces a starting spark of maximum heat in the cylinder, regardless of cranking speed. When the engine is running, the starter is automatically released. The K-W insures an immediate start and positively will not allow the engine to kick back.

There is a K-W High Tension Magneto made for every size of truck. Each type will develop more power out of every gallon used than any other system of ignition.

Manufacturers of trucks know the advantage of an ignition system that keeps trucks on schedules—that is free from the bugbear of costly starting delays. See that the truck you sell is K-W equipped.

Write for details today







The patented Prest-O-Grip Lock Links

Easy to snap on or off. Never Rust. Your hands are the only tools necessary



Prest-O-Grip Anti-Skid Chains for Solid Tires

Are Easy to Snap On and Off

They Give Safe, Sure, Positive Traction

To matter how cold the weather or how bad or how sudden the storm, the driver pulls the short chains, with lock links attached, out of the tool box and fastens them to the clamps on the spokes. There are no long pieces of chains to unravel in the cold, snow or rain. The whole thing is done in a few minutes without tools. The chains are attached wherever the truck happens to be—whether in the garage or on the road; whether on a smooth pavement or in deep snow or mud. The driver never has to push his truck around when attaching Prest-O-Grips.

When the need for the chains ceases, they are quickly detached—chains, with lock-links attached, are thrown into the tool box. The equipment works instantly when needed; it immediately ceases to work when the need has passed.

We are prepared to furnish Prest-O-Grip equipment for disc wheels

Our No. 26 Clamp is standard equipment for attaching Prest-O-Grips to all disc wheels, except those used on Packard trucks—for which we furnish a special clamp, No 20.

For trucks that do not have the necessary clearance between brake drum or brake mechanism and felloe to permit the use of the regular spoke clamp—

We furnish our No. 33 Clamp, which is attached to the felloe of the wheel instead of the spoke. This clamp will fit any wheel using pressed-on tires, with felloes 41/4 in. or wider and 21/4 in. or thicker.

NEW PREST-O-GRIP BOOKLET AND TRUCK DATA SHEET

We issue an attractive booklet fully describing all of the Prest-O-Grip features. Every truck owner, automotive engineer, jobber and dealer should have a copy—also a copy of our No. 5 truck data sheet, listing price and details of equipment for all leading makes of trucks. No need to measure spokes or rims. Every truck listed by make and tonnage.

The Rowe Calk & Chain Company Plantsville, Conn.



No Engine Can be More Efficient Than Its Cooling System

Each Long Cooling System is especially designed for the motor with which it is to be used. Each step in creating the design is taken in co-operation between the Engineering department of our factory with those of the manufacturer. The result is the highest possible efficiency at lowest cost.

Long Cooling Systems are specified by the leading engineers of the automotive industries.

LONG MANUFACTURING CO.

Detroit, Mich.

Pioneer Makers of Cooling Systems for Gasoline Engines

Long Spiral Tubing is the most efficient, durable and dependable for Motor Trucks and Tractors annual capacity thirty million feet. IONG

COOLING SYSTEMS

The Recognized Standard for Tractors, Trucks and Motor Cars.

WOLVERINE 11/2 TRUCKS

This sturdy, dependable 1½ ton truck is built from tires to top on a basis of service-giving that carries conviction to the mind of every truck-wise buyer who sees it.

As an earnest of the high caliber of the whole car, we note above, a few of the principal parts. Comment on their standing in the truck industry is unnecessary. Wolverine buyers get the same quality in every part and in every detail of construction.

Truck Demand Exceeds Supply

Dealers—Don't lose sight of this fact. Trucks in the Wolverine class are being "snapped up" as fast as they can be promised. We can ship promptly. No waiting—no irritating delays. Your customers get delivery service on the dot, but—

We can take care of only a few more dealers and still make good on deliveries. Write or wire—Now.

The American Commercial Car Co.
Gratiot Ave. and Detroit Terminal Railroad, Detroit, Michigan

Points of Selling Punch

A reliable Continental motor supplies maximum power at minimum cost. The Wolverine is equipped with a starting and lighting system, Other features of construction are a Special Cast Shell Radiator; Russel Internal-Gear Drive Axle; heavy drop-forged front axle, equipped with Timken bearings; irreversible worm and gear Steering Gear; a heavy 5" channel section frame and heavy-duty artillery type wheels. Wheelbase, 140".



EVERY DAY

MOTOR TRUCK CAB

A Motor Truck Necessity

The demand for enclosed cabs is rapidly becoming more general and this winter will see it almost universal. Trucks must be run every day this winter, not only on city deliveries but in inter-city express. And to get anything near full results, the drivers must be protected.

Demand It on Your Trucks

You are vitally interested in supplying this demand, for it means more satisfied drivers and owners.

And your interest is best served by insisting that your trucks are equipped with the "Every Day" Cab, for it is the only way you can be certain of a wholly satisfactory cab.

All our years of experience in motor truck body and cab building is back of the "Every Day" Cab. It is designed and built to stand the hardest service and to meet the demands of truck makers and truck buyers. And it is quickly convertible to meet weather conditions.

Specify it on your orders. It is a standardized design, fitted to the needs of any make of truck.

We will gladly send full specifications to any manufacturer

The Highland Body Manufacturing Co.
1217 Elmwood Place Cincinnati, Ohio



INDIAN CHIEF Solid Truck Tires CHIEF The Better Kind

Average Service Better Than 10,000 Miles

Red Indian Tires claim a record for service and efficiency which shows up in miles, dollars and cents, and primal cost considered, we go on record here as affirming and being able to prove, that they are more economical than any other tire made at any price.

The Red Indian is the only Red motor truck tire on the market.

The Red Indian Tire is made by specialists.

The extra volume of tread rubber and profile on all types makes this tire very reasonable in price as compared with other makes.

It is a "come-back-for-more" seller to every fleet or individual owner who installs his first equipment; this for the information and guidance of solid tire dealers.

To Distributors and Dealers

We have an attractive selling plan. Write today if you want to sell a high-grade tire to truck owners who want the best.

Indian Tire & Rubber Company
New Brunswick
New Jersey

The Motorless Motor Truck

Thousands in Use

SIZES

1,250 lbs.

1,500 lbs.

2,000 lbs. 3,000 lbs.

7 000 lbs.

10,000 lbs.

Also semi-trailers

Bodies for every business.

More Profit and a Bigger Market

NHERE is danger in having all your eggs in one basket—as recent conditions have shown. To wise dealers in automotive lines who are seeking a broader foundation for their business, more diversity in the products they sell, and a bigger market to sellin-we suggest the Trailmobile.

It offers a profit margin equal to that on the most sought-for passenger cars and trucks. It can be sold to almost any truck owner, and to many passenger car owners who have hauling to do. It sells easily because it cuts hauling cost from 10% to 60%—and volumes of testimony prove it. Large companies buy Trailmobiles in quantity.

A big nation-wide advertising campaign, and strong direct-by-mail work on dealers' prospects, help you to find and land business and make money. you to find and land busine

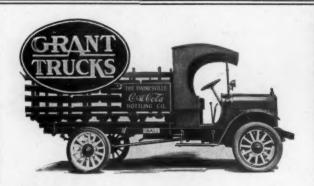
Where Trailmobiles are not now represented we want live men. Write for the facts.

The Trailmobile Co. 502-522 E. Fifth St. Cincinnati - Ohio

Contractors to the U.S. Government







The Complete Trucks

THE first cost is the final cost of GRANT TRUCKS. No extras to buy—equipment is complete and includes electric starting and lighting, windshield, bumper, spot-light, motometer, etc. Modern in design, sturdily built and low in price.

\$1125

1½ Ton Chassis \$1540 2 Ton Chassis \$1850

Grant Motor Car Corporation

Spicer Universal Joints



Universally Accepted as the Most Dependable Flexible Connection Known to Motor Car Practice

Grease - Tight Dust - Proof
PARTS INTERCHANGEABLE

Spicer Mfg. Corporation

South Plainfield, N. J.

Sales Representatives:

A. H. Coates, 41 Spear Street, San Francisco, Cal. L. D. Bolton, 2215 Dime Savings Bank Bldg., Detroit Foreign: Benjamin Whittaker, 21 State Street, New York

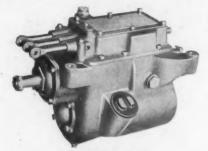


There are over one million Oakes Fans in use every day—rendering a silent, efficient service. They will be found as standard equipment on the majority of the country's best known tractors, trucks and automobiles.

The Oakes Company

Indianapolis, U. S. A.





MODEL H

TRUCK TRANSMISSION

4 SPEEDS

Amidship type, for $1\frac{1}{2}$ —2 and $2\frac{1}{2}$ ton trucks. Also furnished for unit power plant construction, with clutch.

Detroit Gear & Machine Co.

Detroit, Mich.

THE ELECTRIC TRUCK

It puts deliveries on a time-table basis and brings about a material cut in delivery costs. Equipped with

> "Ironclad=Exide" Battery

the Electric Truck stays on the job-idle days are few. The care and attention that the "Ironclad-Exide" Battery requires is relatively small.

The special positive plate construction, the patented cell cover and the non-flooding filling plug are a few of the features of the "fronclad=Exide" Battery that unite in making its performance consistent and dependable, and keeps its maintenance cost at a minimum.

WAR SAVINGS STAMPS TODAY

THE ELECTRIC STORAGE BATTERY CO.

The oldest and largest manufacturer of Storage Batteries in America

PHILADELPHIA, PA.

New York Boston Washington Minneapolis Denver De San Francisco Kansas City Chicago Cleveland Atlanta Detroit Pittsburgh St. Louis Rochester Toronto



All-Steel Ever-Wearing ROGERS TRAILERS

Cut Expense

Raise Profits



Trailers are vital to economical heavy haulage. Operating expenses can be out because a truck can handle three times as much as it can carry. Obviously, three trailers are cheaper than three trucks. Business men with delivery problems can't afford to be without trailers—they raise profits for them as well as for the dealers who meet the demand.

Rogers Brothers All-Steel Trailers are the result of twenty years' experience in steel engineering and manufacturing. Rogers Brothers All-Steel Trailers are ever-wearing—many a one has traveled over 100,000 miles without showing, according to the buyers, any appreciable sign of wear.

Rogers Brothers Short-Turn Gear Trailers are light running, and rear wheels follow in tracks of front wheels when turning a corner. They can be drawn from either end and be backed successfully. Made to stand the hardest usage. All sizes up to 10 tons capacity.

They are brutes for strength. Every ounce of stress, strain, vibration, jerk, jar, carrying stress, etc., is met by proper design and construction.

Write us at once for our dealer proposition. We offer a highly profitable connection to aggressive men capable of handling big business.

Ask for Catalog "J"

ROGERS BROTHERS COMPANY ALBION PENNA. The Kramm Foundry Co. Indianapolis, Ind.

Makers of Maluminum Castings

> announce the placing on the market on June 1, 1918

Kramm Bearings

(Guaranteed)

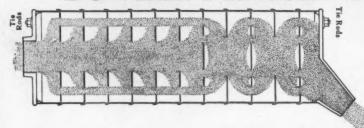
Trucks, Tractors and Aeroplanes

These bearings will be furnished in the rough, ready for machining

SEND US YOUR SPECIFICATIONS

and we will be pleased to quote on your requirements Won't Blow Up, Won't Leak, Won't Rattle. 'Twill Save the Price of the Muffler in Repairs in One Year's Time

POWELL PRESSED-STEEL MUFFLER



The cut illustrates the course taken by the exhaust gases in going through the muffler. It will be noted the very large holes that are used so as to eliminate back pressure and prevents the filling up with carbon. This cut also shows the method of assembling the sections so that one section overlaps another, forming a gas-tight joint, and makes the baffle plates integral with the outer shell. This positively eliminates any chance of these plates becoming loose, and also reinforces the outer shell so that they will not blow up. Malleable iron heads are used on both ends with the rods running the full length of the muffler.

In making inquiry for mufflers, always state size of exhaust pipe, the bore and stroke and number of cylinders of your motor.

Standard equipment by 40 concerns—such as Pierce-Arrow, White, Garford, Autocar, Fifth Avenue Coach Company, etc.

POWELL MUFFLER & TIMER COMPANY, UTICA, N. Y.

WOONSOCKET BODIES



SPECIAL AND DUMP-ING BODIES, in three different sizes, 1, 1½ and 2 ton capacities, suitable to attach to Ford 1 ton, or Ford Units. Best combination of its kind. Can be used for Express work and Dumping work. Write for prices.

Woonsocket Wagon Manufacturing Company Woonsocket, Rhode Island





It Sells Because It Seals

Dealers who are replacing ordinary "stock," leaky piston rings with the Gill Ring, are getting more and more business from truck owners who hear of its splendid work on engines in their localities.

Such, too, will come to you dealers who take on the work of holding high compression, and showing wonderful fuel and oil economy through the service you render, by installing these positively gas and oil-proof piston rings. Stock up on them now.

THE GILL MFG. CO. 351 W. 59th St. Chicago

Use MACO PRODUCTS for Trucks and Tractors

Complete Truck Dash and Seat Units

(Including Gas Tank)

Ready to Bolt to

Chassis



Fenders Hoods

Tanks
Radiator Cores
Mud Pans

Sheet Metal Parts

McDole Automobile Sheet Metal Works water Street, E. Kalamazoo, Mich.



Under the Stress of War Duty

real efficiency is brought to light. Equipment that fulfills war's demands meets every commercial requirement. The army recently con-tracted for many thousands of F.W.D. Trucks, equipped with

Four- and Six-cylin-der (all four-cycle) for Trucks, Tractors and Commercial work.

Write for specifications of types and sizes.

This signifies Government approval of Wisconsin Motors' continuous, consistent, dependable power. Of proven mastery over every power contingency. The argument that clinches truck and tractor sales.

WISCONSIN MOTOR MFG. COMPANY Sta. A. Dept. 320 Milwaukee, Wis., U.S.A.

DISTRIBUTORS:

New York Branch: 21 Park Row, T. M. Fenner, Factory Representative.

Pacific Coast Distributor: Earl P. Cooper Co., 1310 Los Angeles Street

Los Angeles, Cal.

LTO MOTOR TRUCKS

FARMING DALE,

LONG ISLAND

"Triple-heated" gas the secret of Fulton economy

Fulton one-and-a-half-ton trucks average from 12 to 14 miles to the gallon-in more than three hundred different lines of business.

This gasoline economy-hitherto unheard of in a truck-is the result of the "triple-heating" of the gas, an exclusive Fulton feature. By means of this super-heating, every ounce of fuel energy is made to deliver its maximum of driving power.

Tire economy is assured by the adoption of the internal gear drive axle, acknowledged to be not only the ideal type for motor trucks but the easiest on tires. Send for our booklet "Triple-Heated" Gas.

The Fulton Motor Truck Company

Capacity 1½ Tons

Farmingdale, Long Island, N. Y. Distributors in principal cities Write for open territory



Every practical size of truck-for every trucking need. GMC Trucks represent the finest in construction and are backed by an old, firmly-established organization. Write TRUCK **HEADQUARTERS** for information.

GENERAL MOTORS TRUCK Co.

One of the Units of General Motors Corporation

Pontiac, Michigan

Branches and Distributors in Principal Cities

JENKINS

A Sound Policy for Truck Makers

Your dealers are entitled to every improvement in construction which will help them sell your truck on its merits. Dealers throughout America are familiar with VUL-CAN quality. They know that VULCAN springs stand up under every test. VULCAN spring equipment on your truck will give your dealers another selling point. Our VULCAN metal nameplate on every

Let us figure with you on your spring requirements.

VULCAN Springs are made of fine grain steel, heat treated, oil tempered and severely tested—the VULCAN nameplate on every spring.

JENKINS VULCAN SPRING CO. RICHMOND, INDIANA



DURSTON TRANSMISSIONS

"Gears of Lasting Fame"

Designed and built for use in motor trucks, **Durston Transmissions** are continually withstanding the hardest service successfully.

One of Our Models

Material and workmanship are the finest-all subjected to a continuous inspection system that covers every department of manufacture.

> We are prepared to offer designs for motor trucks up to $2\frac{1}{2}$ ton capacity. Our Engineering Department is able to offer the limit of the state kind of co-operation you will appreciate.

DURSTON GEAR CORPORATION 29 Maltbie St. Syracuse, N. Y.

HURLBURT TRUCKS

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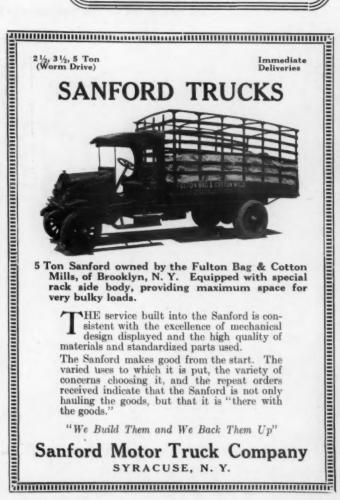
Stand as striking examples of what service trucks should be. This line is the result of a long period of test and trial - and under every condition of stress, overload, and virtual abuse they have proved themselves. Today they are big fleet factors in the employ of many of the country's biggest and best known business concerns.

The Hurlburt line consists of five models-1½, 2, 3½, 5 and 7 tons—all oversized in capacity limits.

Hurlburt trucks are essentially a quality product. As such they are best handled by dealers who appreciate the value of correct design and proper construction, as compared with the "scrambled together" quantity product. We want such dealers. Our proposition will appeal to them.

Hurlburt Motor Truck Co.

Third Avenue and Harlem River New York



CHAMPION DROP FORGINGS Axles---Gear Blanks---Cranks Heading Machine Forgings Steam Hammer Forgings Forgings Without Draft We have the facilities to serve you promptly. efficiently and economically on any of the above. Send us your blue prints for estimates. The Champion Machine & Forge Co. CLEVELAND, OHIO

Here's the One Pedal for Every Purpose!

No other is like it in construction no other can be like it in results. Whatever your requirement may be, the Petry Universal Pedal will meet that requirement in a way that could never be met before.



Made of high-grade steel, with special processed gunbarrel finish, the Petry Pedal is adjustable to pull or push for muffler cutouts of any style, kind or size; Accelerator, Exhaust Whistle or Horn—and Heater Valve.



is the only pedal which can be satisfactorily used on the toeboard. Why bother with an out-of-date pedal which must be disconnected each time you remove the floorboard

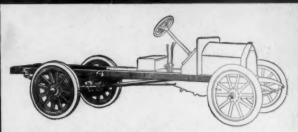
forlubricationor other purposes? Write for circular today-and, remember, we can make immediate deliveries if you order at once

N. A. PETRY COMPANY, INC. 1319 Race Street, Philadelphia

Distributors: Gray-Heath Co., 1440 Michigan Ave., Chicago, Ill.
Norman Cowan Company, 433-435 Rialto Bldg., San
Francisco, Cal.







HE TRUXTUN will convert any car into a sturdy, dependable, 11/4, 2 or 3 ton truck. An especial feature is the internal-gear axle drive, the same type as on 90% of "standard make" trucks. TRUXTUNS are now solving the delivery problem of thousands of owners.

DEALERS! An unusual opportunity to open new trade. Exclusive territory with liberal offer. Write for details.

COMMERCIAL CAR UNIT CO.

Oldest and largest makers of shaft-drive trucks PHILADELPHIA, U.S. A.

DELAWARE HARD FIBRE COMPANY

Wilmington, Delaware

Manufacturers of hard and flexible vulcanized fibre in sheets, rods, tubes and special shapes.

Sole manufacturers of

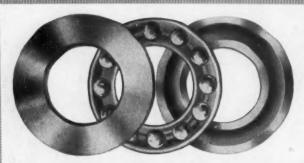
Egyptian Fibre

The best for all machine work

Branch offices in all principal cities

New York 50 Church Street

Chicago 28 South Jefferson St.



We do not stock or list Ball Thrust Bearings, but build them to the requirements of the user.

Let us quote on your bearing requirements and duplications of the Thrust Bearings you are now using.

THE BEARINGS COMPANY OF AMERICA Lancaster, Penna.

Western Sales Office, 1012 Ford Bldg., Detroit, Mich.



CULLMAN SPROCKETS

in stock and to order.



For Block, Roller and High Speed Silent Chains. New Catalog.

Cullman Wheel Co., 1351 Altgeld St., Chicago





AUGLAIZE

Quadruple Worm Gear Drive .

The exclusive features of the Auglaize Hoist are completely covered by U. S. patents. You have to pay more for any other efficient hoist and still do not obtain the advantages offered by the Auglaize. It weighs less than any other hoist; it occupies but 8" in back of driver's seat. It can be inother noist; it occupies but 6° in back of driver's seat. It can be installed in a short time without drilling holes in the chassis frame or driver's seat, and regardless of the body being of wood or steel. With the Auglaize a boy can raise 4 tons in 3 minutes. Prices up to 1½ tons, \$83.00; from 1½ to 5 tons, \$109.00.

Inexpensive Alsteel Bodies

The strongest and best bodies built, yet low in price and with no upkeep expense. Will carry 50% overload and are guaranteed against defective workmanship. Price, according to size, \$150.00 to \$225.00. Write us for further details on Auglaize Hoists and Alsteel Bodies.

AUGLAIZE MOTOR CAR CO., NEW BREMEN, OHIO



Superstrength—road shock absorption—long life under every climatic condition—freedom from flaws and unseen weak spots—ease of repair—lightners in proportion to strength and low cost.

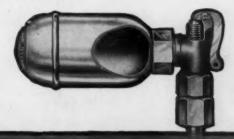
These are the splendid qualities that have made

SCHWARZ WHEELS

dominant in the truck and passenger car field. Schwarz construction methods include a patented interlocking spoke construction which insures a rigid spoke-center construction which will withstand the greatest strains.

For every service reason Schwarz Wood Wheels should





Is Standard or Optional Equipment on the 40 FOLLOWING TRUCKS 40-

argo

| 12 Hendrickson | 22 Menard | 13 Indiana | 23 Menominee | 14 Klemm | 24 Mack | 16 Lamson | 26 Ogden | 17 Larrabee | 27 Old Reliable | 18 LeMoon | 28 Palmer Meyer | 19 Little Giant | 29 Packard | 20 LaFayette | 30 Pierco-Arrow

Service Victor Viali Western Wichita Wilcox White

BECAUSE

After careful tests by the engineers of above representative manufacturers, the

BUELL EXPLOSION WHISTLE

was found to be the most Simple, Powerful, Dependable and Economical Auto Warning Device Made Special contract prices to mirs, Jobbers and dealers write today for proposition

BUELL MFG. CO. 2981-83 Cottage Grove Ave. CHICAGO

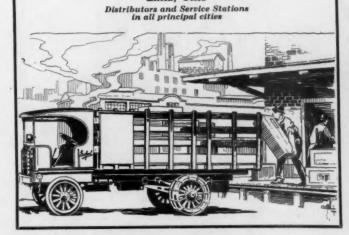






HERE is a Garford to fit every business need! The Garford line embraces Motor Trucks of 1, $1\frac{1}{2}$, 2, $3\frac{1}{2}$, 5 and 6 ton capacity; $4\frac{1}{2}$, 7 and 10 ton Tractors.

The Garford Motor Truck Company Lima, Ohio





It should be right in front of your place of business. Because in a few words it tells a complete story.

It tells motor truck buyers where they can get the most truck value for their money.

It represents more dependable service—greater economy of operation—an ultimate saving that gains the buyer's confidence.

It represents the following parts;
Continental Engine (Red Seal)
Torbensen Axle
Bower Heavy-Duty Bearings
Fuller Transmissions
Fuller Transmissions
Fuller Transmissions
Fierce Governor

Tress

It represents motor truck dealers who have a high standing in their community and are business men through and through.

Write today for special catalog C and complete information. 'Performance Its Proof of Perfection'



MUSKEGON ENGINE CO. Michigan Muskegon,



has made it possible for the Hoosier clutch to add 20% grip efficiency over and above that of any other design. This, of course, guarantees longer life and calls for fewer adjustments.

In design it offers less weight, fewer parts, perfect balance, simple adjustment, and ready accessibility. In material it combines only the very best, and when you consider the amount of frictional punishment to which a clutch is subjected, then the question of quality of materials looms large. The

HOOSIER CLUTCH

is turned out in a factory with ample facilities for guaranteeing faultless work and quick deliveries, and your requirements will be met, no matter what they may be.

In this connection, note that the Hoosier clutch is made in several sizes in unit power and amidship types, and interchanges with other clutches of similar design.

We solicit opportunity to go into this matter thoroughly with automobile, truck and tractor engineers. Our work, when explained in detail, will carry conviction to the trained minds of those who know what a good clutch should be—and what it frequently is not.

The Hoosier Auto Parts Co. Muncie Indiana



"A better spark in a simpler way"

The TEAGLE High Tension MAGNETO

for Trucks or Tractors—two, four, or six cylinders—with fixed or variable spark. Conforms to S.A.E. standards. Write for booklet.



THE TEAGLE COMPANY
CLEVELAND, OHIO



Heavy Duty Truck Frames

Our Heavy Duty Truck Frames are especially designed for severe and unusual service. These are frames you want if you build a high-grade truck. They live up to every claim we make for them.

Our engineers are at your service, and we solicit your inquiries.

Savage Arms Corp.

Formeriy

Driggs-Seabury Ordnance Co. Sharon, Penna.



Capacities: 2, 3½, 5 Tons

High Grade for Truck Speed. Made with or without Brakes. They are built for

Heavy-Duty Service

Dealers: Add Trailer Profits to your Profits by selling Arcadia Trailers.



Newark, New York State





Cone Clutch Facings

Motor Trucks

LEATHERTEX is a combination of carefully selected, specially tanned leather and textile—really merged into one element under 3,000 pounds hydraulic pressure—with a leather face for the clutch, and a textile backing next to the cone.

More durable than solid leather more resilient than solid leather retains its shape longer and better than solid leather. It is absolutely uniform in tensile strength and thickness. Made for all makes and models of motor trucks.

HIDE, LEATHER & BELTING CO.

241 S. Meridian St. Indianapolis, U.S.A.

Westinghouse

Automotive Electric Equipment

For

Automobiles

Trucks

Tractors

Airplanes

Motor Boats

Locomotives



Westinghouse Electric & Manufacturing Company

Automobile Equipment Department

General Offices: 110 to 114 West 43d Street, New York

Cleveland, Ohio Detroit, Michigan Indianapolis, Indiana

Works: Newark, N. J.

CRAMP







Built like the best known American heavy trucks, with all their successful features, including worm drive, Brown-Lipe Clutch and Transmission, deep frame, long wheelbase and special truck motor. Used in quantities by hundreds of leading firms throughout the country with whom first cost is not the deciding factor.

1/2 ton chassis \$1250

34 ton chassis \$1350 1¼ ton chassis \$1595 1½ ton chassis \$1890

Rainier Motor Corporation

Factory, Flushing, L. I., New York Sales Dept., 225-227 West 58th St., N. Y. City







The BURKE ONDENSER

Attaches to the raditor cap like a motometer; prevents loss of water or anti-freeze mixture from the cooling system; enables any car to make 1,000 miles easily on one filling; distills the water continuously and protects radiator and system passages from corrosion, "scale," electro-lytic or chemical action; makes the use of alcohol as a freeze medium practicable and inexpensive.

for all cars, trucks and tractors

The Burke automobile products are all new, vital aids to the motorist; increase life and mileage and reduce operating

overhead. There are big opportunities for the dealer with this line now -but watch it grow. Write for Descriptive Literature and Dealer Proposition

Automobile **Devices Company**

Real Estate Trust Bldg. Philadelphia, U.S.A.



Ford Model

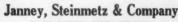


Give You the Use of Every Drop of "Gas" and Prevent Fire and Explosion

The worth of the "Jasco" Tank is recognized both by pleasure car and commercial vehicle users.

It is the absolutely leakless gas receptacle-made of the finest steel, drawn, tinned and tested, and positively seamless.

Made in many styles and sizes for automobile or motor boat. Send for detailed literature.







For Truck or Tractor

Whether in the axles, transmission, third member or steering gear of truck or tractor—

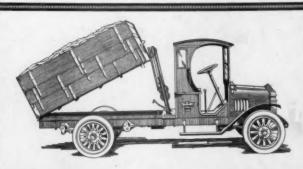
The Schatz "Universal" Annular Ball Bearing will carry the heaviest radial load and at the same time meet end thrust in whatever degree it may be present.

In fact, this bearing will sustain 300% to 400% more end-thrust load than any other known annular bearing, because it has three definitely located contact areas.

Write for new catalog

THE FEDERAL BEARINGS CO:

34 WILLIAM ST., POUGHKEEPSIE N.Y.
Great Britain: 37 Sheen Road, Richmond London.



PATRIOT FARM TRUCKS

Built for Country Roads Built for Country Loads

FARMERS like them because they are built for farm work and equipped with the Patriot Dump Body, with its powerful Patriot Hand Hoist, making it possible to easily and quickly dump the load. The Hoist is our own invention. The body is built like a farm wagon body, except better. Will stand long and hard wear. Write for agency information.

Hebb Motors Company

Manufacturers of Patriot Farm Trucks

1331 P Street

Lincoln, Neb.

A BIG HELP TO THE TRUCK TRADE

Truck distributors, service and repair stations spend thousands of dollars on "service" to buyers of their trucks. Loss of motor power, excessive carbon and abnormal consumption of oil and fuel are frequent complaints.



PRESSURE PROOF PISTON RINGS

Pat. March 2, '15; Feb. 29, '16

The Ring With the Spring

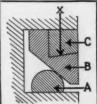


Diagram showing the principle of operation of Pressure Proof Piston Rings to be mechanically correct.

eliminate these troubles. They keep the motor free from carbon, give it sustained power and conserve oil and gasoline.

One Pressure Proof 3-part, or two Pressure Proof 2-part rings are a full piston equipment.

PRESSURE PROOF PISTON RING CO.

168 Massachusetts Ave.

BOSTON, MASS.







DOEHLER BABBITT-LINED BRONZE BEARINGS

The bronze used in these bearings is of the coppertin-lead type, alloyed by us from the highest grade

Connecting-Rod Bearing

metals obtainable. The Babbitt is of the tin-antimony-copper variety, absolutely free from impurities.

The Babbitt lining is joined to the bronze shell by a special process, of our own development, which results in a uniform, sound, and homogeneous unit.

The CONSISTENT use of these bearings, year after year, by the most prominent Motor builders in the country is ample proof of their merits.

DOEHLER DIE CASTING CO.

BROOKLYN. N.Y.

NEWARK, N. J. TOLEDO. OHIO.

Also Die-Cast Babbilt Bearings. Die-Castings in Brass & Bronze, Aluminum and White Metal Alloys

WHY NOT INCREASE YOUR TRUCK SALES

by using your credit with us in financing your time-payment sales?

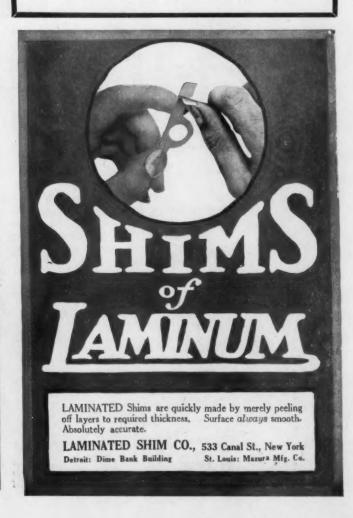
Accounts of responsible dealers solicited on an attractive plan.

OLIN FINNEY & CO., INC. PHILADELPHIA PA.

Branch Offices in Principal Cities

WRIGHT Taper Roller BEARINGS







SEAL-TITE PISTON RING CO.

1700 E. Lake Street

Minneapolis, Minn.



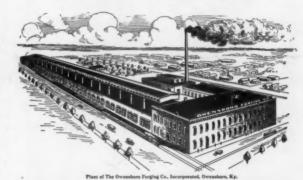






OWENSBORO FORGINGS

Represent the Highest Quality in the Production of Light Drop Forgings for Trucks-Tractors



We specialize in Top Irons, Commercial Body Irons, Chassis Irons, Tail and Headlight Brackets, End Gate Eye Bolts, Iron Braces, Spring Clips for Trucks, and in fact all types of Light Forgings.

We have a large plant, excellent shipping facilities, and use only high-grade materials.

Send us your blue-prints and let us quote you

The Owensboro Forging Company, Inc. Owensboro, Kentucky

Le Roi Engines

600 E. State Street

SPARK PLUGS

Are Unequaled for Heavy **Duty and Continuous Service**

Price \$1 at all dealers

Write for Booklet

BERGIE NATIONAL SPARK PLUG CO.

OTANDARD on a number of light truck, tractor and power cultivator outputs. Recognized and used on past and present records of excellence.

The LeRoi engine will carry its share of long life, faultless performance and economy. If similar quality marks all other parts, then the product so equipped is a model of promise and performance.

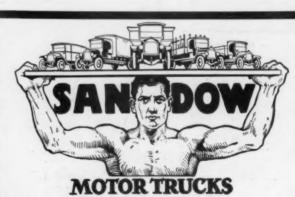
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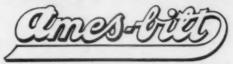
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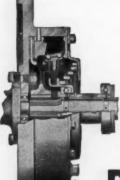
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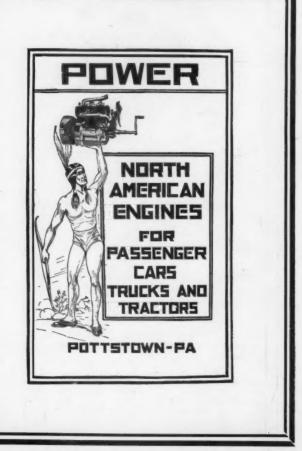
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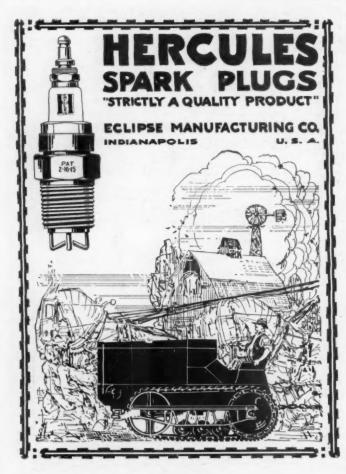
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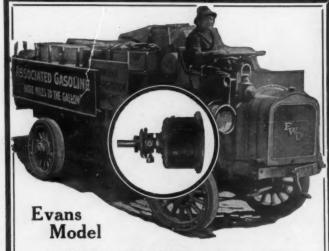
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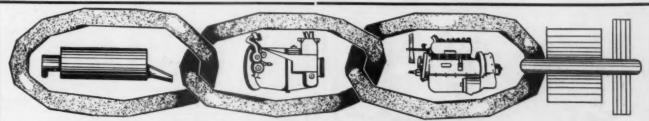
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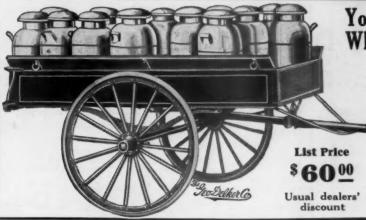
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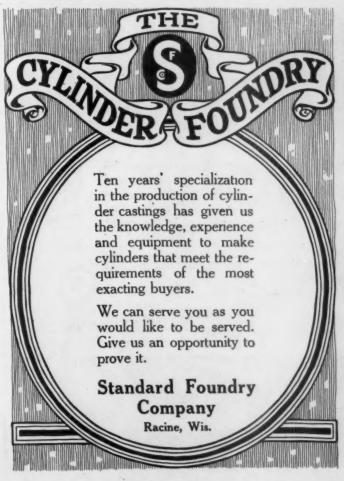
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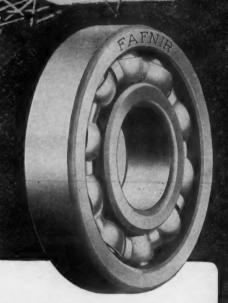






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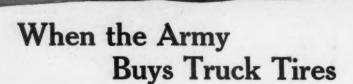
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	Firestone Tire & Rubber Co	New Departure Mfg. Co	York Corrugating Co,





production is going.

Some of the thousands of truck tires in reserve behind the American lines in France—an answer to where the bulk of

WHEN the army buys truck tires it gives special attention to the rubber compound.

As you perhaps know, rubber, like gold or metal or hides, needs chemical assistance to make it practicable. Pure rubber truck tires would be a tragedy. So the manufacturer, in his laboratory, compounds or mixes materials to give the rubber toughness and vitality without sacrifice of elasticity.

And he who compounds most skillfully produces the BEST truck tire, the most lasting!

In this respect, don't you think the fact that Goodrich was the *only* manufacturer to deliver tires direct from stock—when the government asked for truck tires—without changing the compound to meet government specifications speaks volumes for Goodrich Truck Tires, the product of a half-century of rubber experience?

THE B.F. GOODRICH RUBBER COMPANY

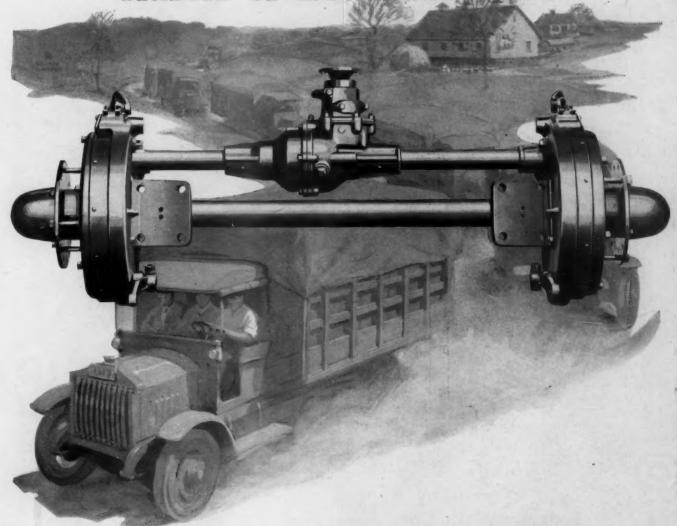
The City of Goodrich-AKRON, OHIO

Deluxe Truck Tires

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The Russel Drive

Master of Road and Load



Ever Eastward to the Sea

Perhaps you yourself have seen them, on some lonely country road, at twilight or early dawn—the Motor Trucks—moving ever eastward to the Sea. First, a cloud of dust; then a Truck, grim and huge. Then another Truck; then a score of Trucks. If you have seen them, you have felt the Might, the Invincibility of them. You have felt that the Trucks were taking the answer of Democracy and Freedom straight to Berlin. And They are!

Do you know that soon in France we shall have a Motor Transport Corps of five thousand officers and a hundred thousand men, twice the size of the entire U. S. Army when we declared war?

Such has been the achievement, such is the Destiny of the Motor Truck—to Win the War. And the Russel Internal-Gear Drive Axle, vital to the Efficiency of the Truck, and therefore vital to the Overwhelming Victory, is our contribution.

Russel Motor Axle Company, Detroit, Michigan, U.S.A.

Internal Gear Drive Axles for Motor Trucks

"One Stewart truck supplants ten horses"



And in over 5 years no Stewart has ever worn out Chas. Crews & Son, of Plainfield, Indiana, report that-

After having had a Stewart for 16 months, it is now doing what 5 teams would not do-

"Our expense on truck, outside of tires and gasoline, does not exceed \$25 -

"We make an average of 12 miles to the gallon-

"If we were going to buy another truck we would surely buy a Stewart."

(Copy of Mr. Crews letter furnished on request)

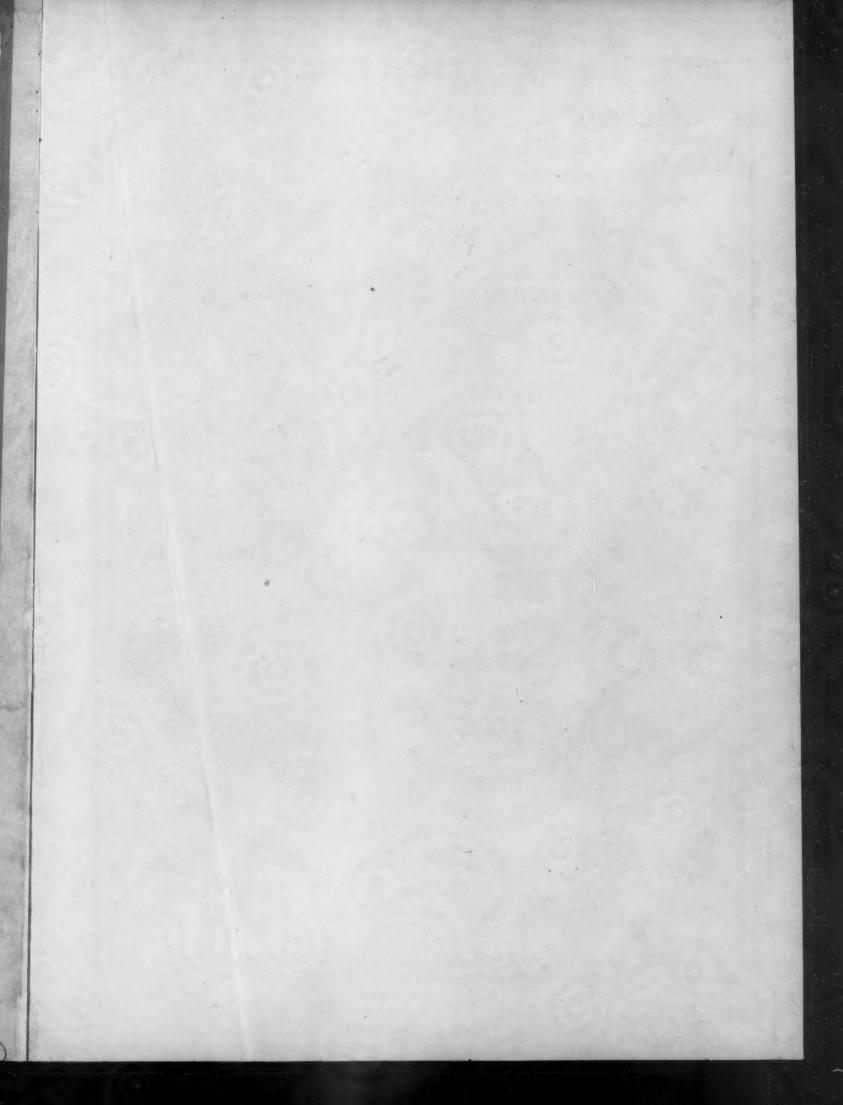
Stewart Motor Corporation
Buffalo, N.Y.

Staut

MOTOR TRUCKS

34 tom · \$050 1 tom · \$1575
1/2 tom · \$1575
3/4 tom · \$3500
All prices fob Buffalo

Stewart dealers are proving that the Stewart Dealership is immensely profitable. Investigate



Retailing Truck Tires Through Dealers

By M. SMOLENS, Manager Sales Development, Polack Tyre & Rubber Company

T may be correctly said that what has in the past, more than anything else, kept truck tire sales from being more generally taken up by the dealer, is the service feature essentially connected with truck tires, that is, the applying of the tires to the wheels.

The universal method of applying truck tires, even in the smallest localities, is the hydraulic press. While there are a large number of tire presses scattered today throughout the country in the hands of dealers, in both large cities and small towns, the fact that many dealers who do not own tire presses have become large factors in truck tire sales, shows that the service feature in truck tire sales in the past, instead of being the primary obstacle in itself, was rather a contributing difficulty brought on by other underlying conditions, existing in the truck tire industry. Obviously, therefore, if these underlying conditions in the industry have been either rectified or eliminated, it follows that the obstacle of the service feature has been overcome.

Chief among these past conditions was the number of trucks in use. While the number of trucks in use was limited, confined principally to the larger cities or to certain industrial sections and their number scattered, only the larger cities could find sufficient work for a tire press.

Now, on the other hand, with the tremendous increase in the use of trucks, both in number and in character, in agricultural as well as in industrial communities, in city as well as in intercity use, the matter of a tire press becomes trifling by comparison with the results to be derived from so large and general a demand

Again, lack of, or, in any event, insufficient standardization is another factor which operated in the past against the proper development of truck tire sales through dealers. Although the S. A. E. standard wheel was adopted a number of years ago by truck manufacturers, it is only now that the real fruits of standardization are realized. The more recent standardization of the method of applying the tire direct to the permanent wheel band is now complete with the adoption of only a handful of sizes to be used in future.

Another outstanding factor in the old conditions which placed the service feature of truck tire sales at a disadvantage was the experimental stage through which the truck tire product was passing, as in the case with the first years of the pneumatic tire or the automobile.

During the past two or three years particularly, the truck tire product has been standardized and stabilized, but prior to

that truck tires as a whole were an uncertain, and at times, a very unsatisfactory product, involving adjustments and various other exacting demands that naturally arise in a condition of that kind, so that the service feature had the effect of nullifying the profit and prestige in the sale of the truck tire.

Today, on the other hand, truck tires as a whole are good tires, giving general satisfaction, and requiring comparatively few adjustments or other special features of service, so that the service feature is almost a routine, perfunctory procedure.

Thus, instead of a series of unfavorable conditions in the truck tire industry making of the service feature a needless obstacle, we find today in every direction in the truck tire business great strides that make the service feature an ordinary detail.

Today with the large demand and constantly widening market for truck tires, with standardization in truck tires to the smallest detail, with the improved quality of the truck tire product, the chief obstacle of the past may be said to have been removed. The matter of a tire press, where the dealer takes on the sale of truck tires on the basis of giving his own service, is no more of an item than the installing of the usual fixtures in a store, or the adding of an item of machinery for the improvement of a business, that soon pays for itself.

But the dealer maintaining his own press, is no longer the only source for the distribution of truck tires. As in the case of the pneumatic tire, the automobile, or the accessory, the field for truck tires has now reached such dimensions that the subdealer performs a very essential function even where he takes on the sale of truck tires without the maintaining of his own service facilities. merely by arranging for his service with an outside concern who already maintains a tire press. In many such cases it is found the outside concern having such facilities is only too glad to arrange with other dealers taking on truck tire sales without maintaining service, to furnish the service to them at a stipulated charge, thus increasing the profits of its service station.

With the rapidly increasing number of trucks in use in all communities, it is now found that the demand for truck tires soon becomes so great that even in a small town, where there may be two or three dealers equipped with tire presses, these dealers soon find it desirable to supplement their existing line of truck tires with still another. And with the continued expansion of truck use, which is

about to receive even greater impetus than at any time yet, not only will the number of truck tire dealers having tire presses increase, but the dealer without one will play a more conspicuous part in truck tire sales, in the same position that the subdealer in pneumatic tires or automobiles occupies in relation to his distributor.

Since its inception the whole development and growth of the automobile industry has in no little measure been a series of applications of merchandising principles, drafted from other and older lines of business. A pertinent parallel may be drawn between the hardware and the truck tire business. In a given community a hardware jobbing house is found to maintain a warehouse with a complete stock, service equipment, etc. The small hardware concern in the same community, which it supplies, may have a call for some hardware equipment or machinery, which it is not equipped to carry, but by sending the customer to the jobbing hardware house the order is supplied or the service rendered for the account of the retail merchant.

In the same community the branch of the truck tire manufacturer or territorial distributor is in no different position than that of the hardware jobber, and in fact, he may be the truck tire distributor. If the retail dealer maintains his own service facilities, he is independent of the branch distributor, except for the receiving of his supplies.

If the retail dealer does not maintain his service facilities, but merely carries a limited stock, he takes care of his orders by looking to his distributor for service in the applying of the tires.

In the early days of the pneumatic tire, when the owners of automobiles grew to such large numbers that the tire branch or distributor found itself inadequate to care for all the business, the tire dealer, automobile dealer, accessory dealer and garage, solved the distribution problem.

The rapidly growing number of trucks in use in every quarter now finds the tire branch or distributor insufficient in satisfying the demand. The tire dealer, accessory dealer, automobile dealer, garage, and hardware jobber, will be the answer for truck tire distribution to meet the tremendous demand here and to come.

To the extent that the now simplified, profitable service feature is an additional detail in truck tire sales, will the dealers in truck tires be bigger, broader and better dealers, who know and appreciate that in proportion as a business increases in its scope is the opportunity bigger, broader, better.



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Motor Transportation Conference Arouses Unusual Interest

HAT owners of commercial cars and prospective purchasers appreciate any effort made by the dealer in supplying information dealing with efficient and economical use of trucks is proven by the large attendance and interest manifested at the Motor Transportation Conference conducted by the Colt-Stratton Co., in their show rooms at New York City, November 12-23, inclusive. Nearly 900 attended the conference.

The company, at considerable expense, arranged a very practical list of subjects, these dealing with practically every angle of transportation, and the speakers were men of wide experience and many prominently connected. Several Government representatives were present as well as transportation and mechanical engineers. Practically every phase of the use of motor trucks was dealt with, and at the conclusion of the lectures those present asked questions which led to a general discussion of the subject. Many interesting facts were thus brought out. The subjects and speakers were as follows:

Motor Vehicles in the War, Lessons for Commercial Users; Major George A. Green, assistant chief engineer, Tank Corps, British Army.

Warfare by Automobile; John R. Eustis.
Connecting City and Country by Motor;
F. W. Fenn, secretary Rural Motor Express
Committee, N. A. C. C.

Methods and Devices for Increasing Motor Transport Efficiency: Cost Accounting, Routing, Loading Devices; T. D. Pratt, executive secretary, Motor Truck Association of America. Inc., and William P. Kennedy.

Trailers; George Cline, Jr., Troy Trailer

Fuel Economy; Hugo Gibson.

Pneumatic Truck Tires; A. W. Ellis, Goodyear Tire & Rubber Co.

Problems and Possibilities of Store Door Delivery; Joseph Husson, editor Commercial Vehicle, and Arthur G. McKeever.

Motorizing the Mails: James I. Blakslee, Fourth Assistant Postmaster General.

Inter-City Haulage; E. S. Foljambe, directing editor, Commercial Car Journal.

Return Loads and Return Load Bureaus; H. G. Shirley, Highways Transport Committee; J. F. Winchester, secretary Motor Truck Club of New Jersey; A. G. Way. Jr., executive secretary of Motor Truck Club of New Jersey; Cyrus C. Miller, Federal Food Board of New York.

Relation of Highways to Motor Transport Efficiency; Arthur H. Blanchard, president National Highway Traffic Association; C. M. Pinckney, chief engineer, department Public Works, Bureau of Manhattan; Harry S. Quine, Goodyear Tire & Rubber Co.

Traffic Congestion and Motor Transportation; Samuel W. Taylor, director National Highway Traffic Association; inspector O'Brien, traffic division, New York police department; A. G. Batchelder, executive secretary American Automobile Association; General Francis V. Greene.

Moving pictures of the Renault factory and tanks were shown at the conclusion of each evening's conference.

The conference demonstrated the increasing interest in motor trucks by men analyzing the possibilities of establishing transportation companies and operating cars in express and other service. The majority of those who took advantage of the opportunity afforded to talk with the speakers at the conclusion of the evening's conference were keenly interested in cost figures. These were supplied in some instances by some of the transportation experts, but it was evident that the demand exceeded the supply.

Much of the success of the conference is due to the efforts of John R. Eustis, who directed it and obtained the speakers. The conference is to be supplemented by similar events, educational and instructive in their scope, and will be held semi-annually.

New York' Headlight Law Not Entirely Satisfactory

At a meeting of the Illuminating Engineering Society held in New York City, Nov. 14, a report of the committee on motor-car headlight specifications was read. A demonstration of the apparatus used in testing headlight apparatus to determine whether or not it conformed to specifications, was given, and, in a discussion which followed, the point was made that, while the chief object of the rulings was the control of headlight glare, it was important that headlight devices be so constructed that sufficient illumination is obtained. One speaker said that in Massachusetts more accidents were due to want of sufficient illumination than to a blinding glare.

The committee reached the conclusions that some of the requirements of the headlight law were not sufficiently specific and that they had not yet been given a fair trial.

Nash Returns to Kenosha

Charles W. Nash, who has ably assisted Assistant Secretary of War Ryan in the carrying out of the aircraft program, has returned to the Nash factory at Kenosha.

During the absence of Mr. Nash the work of the Nash Motors Co. has been supervised by C. B. Voorhis. During the war the plant produced \$37,000,000 worth of transportation equipment. The increased manufacturing facilities, necessitated by the acceptance of Government contracts, will now be employed in the production of cars and trucks for general consumption.

Massachusetts Dealers Are Alarmed Over Truck Legislation

Legislative action in the direction of limiting the weight of trucks which will be allowed to operate on Massachusetth highways led dealers in that State to protest against further regulations affecting their business.

A special legislative commission has been appointed to draw up new rules for truck operation, and in addition to the regulation affecting the weight of trucks, regulation of the width is being contemplated. Charging of larger automobile fees, further control of headlight regulations, limiting of the number of passengers in jitneys and specifying the number of trailers that a truck may draw are subjects also under consideration by this commission.

J. H. MacAlman headed the group of dealers who entered a protest against the curtailment of business which would undoubtedly follow the enforcement of regulations which seem to encourage the policy of building the truck to fit the road rather than the road to fit the truck

Receivership of Smith Motor Corporation Ended

The inventories and good will of the Smith Motor Corp. were acquired by the Dearborn Truck Co., when the receivership of that company was terminated recently. The Dearborn Co. also acquired by purchase the name, business and good will of the Smith Form-A-Truck Co., the holding corporation, which was not insolvent. The Dearborn company will continue the manufacture of the Smith type of trucks and the Smith name will be continued as a trade brand. Borg & Beck, of East Moline, Ill., bought the Smith factory, and a large amount of machinery and equipment was sold at public auction on November 22 by Samuel L. Winternitz & Co. General creditors will realize 25 per cent. of their claims.

Truck Hauling Coal Makes Record Saving

When the Fuel Administration ordered the railroads to furnish no more cars to the "wagon" coal mines (those located a distance from the railroad, and necessitating a haul to the spur), the Dixie Bee Line Coal Co., of Morton's Gap, Ky., decided to purchase a truck. A two-ton Federal truck was bought and during one month loaded 21 cars. A 45-ton car is easily loaded in six hours, hauling the coal about one mile. With horse-drawn equipment the car could be loaded for 60 cents per ton, or \$30 per car. With the truck the car is loaded for \$11.43, including all items. This saving of \$18.57 per car amounts to \$334.26 per month, if 18 cars per month are loaded.

THE COMMERCI

under the act of March 3, 1879

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PHILADELPHIA, JAN. 15, 1919

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Published the 15th of each month by the

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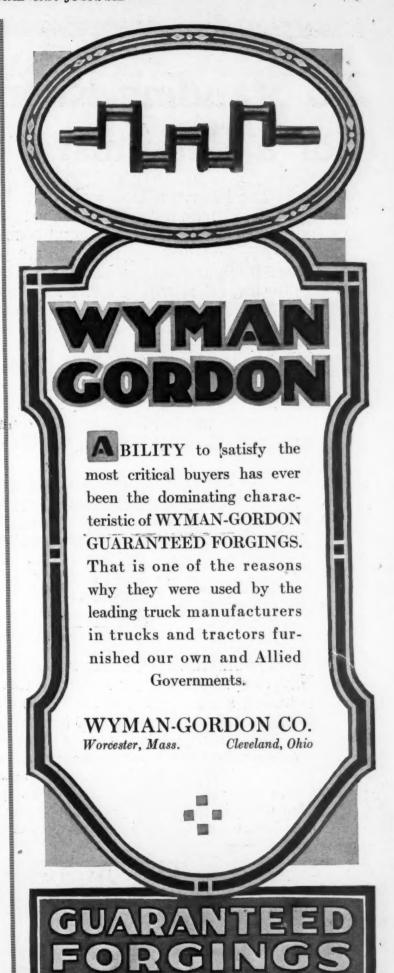
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SUBSCRIPTION RATES

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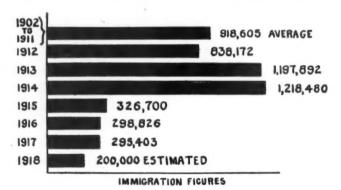
No Standing Room For a Pessimist

The Priorities Division of the War Industries Board is to be congratulated upon its quick action in removing (effective on November 22) all restrictions affecting general business.

Are you now organized or are you preparing to organize the personnel of your enterprise so that you can secure your share of the volume of business that will be transacted in the United States during 1919?

There is no doubt that all the labor available throughout the United States will be employed at good wages. This automatically stabilizes business.

The chart below speaks for itself and shows how materially immigration increased our labor supply from 1902 to 1914. It also brings out forcibly the yearly loss to our labor supply that we have had to contend with since 1914, and it is reasonable to suppose that no European country for some years will permit any large amount of emigration.



We still have some four million men in the service of the Army and Navy, for whom we must produce food and clothing. Unquestionably, it will be a long period of time before more than two and a half million of these men will be released to resume productive occupations.

The quantity of food and other supplies which we furnished the European countries prior to 1914 was small compared with what it is now our duty to provide.

A great big volume of business will be transacted throughout the United States during 1919 and the years to come. To take care of this we are confident that labor will quickly return to peace-time occupations and that there will be an extensive use of modern machinery in every line of endeavor.

The Autocar Company

Established 1897

Ardmore, Pa.

Nov. 23, 1918

Manufacturers of The Autocar Motor Truck